

REVIEWED: ALL-NEW MACBOOK PROS

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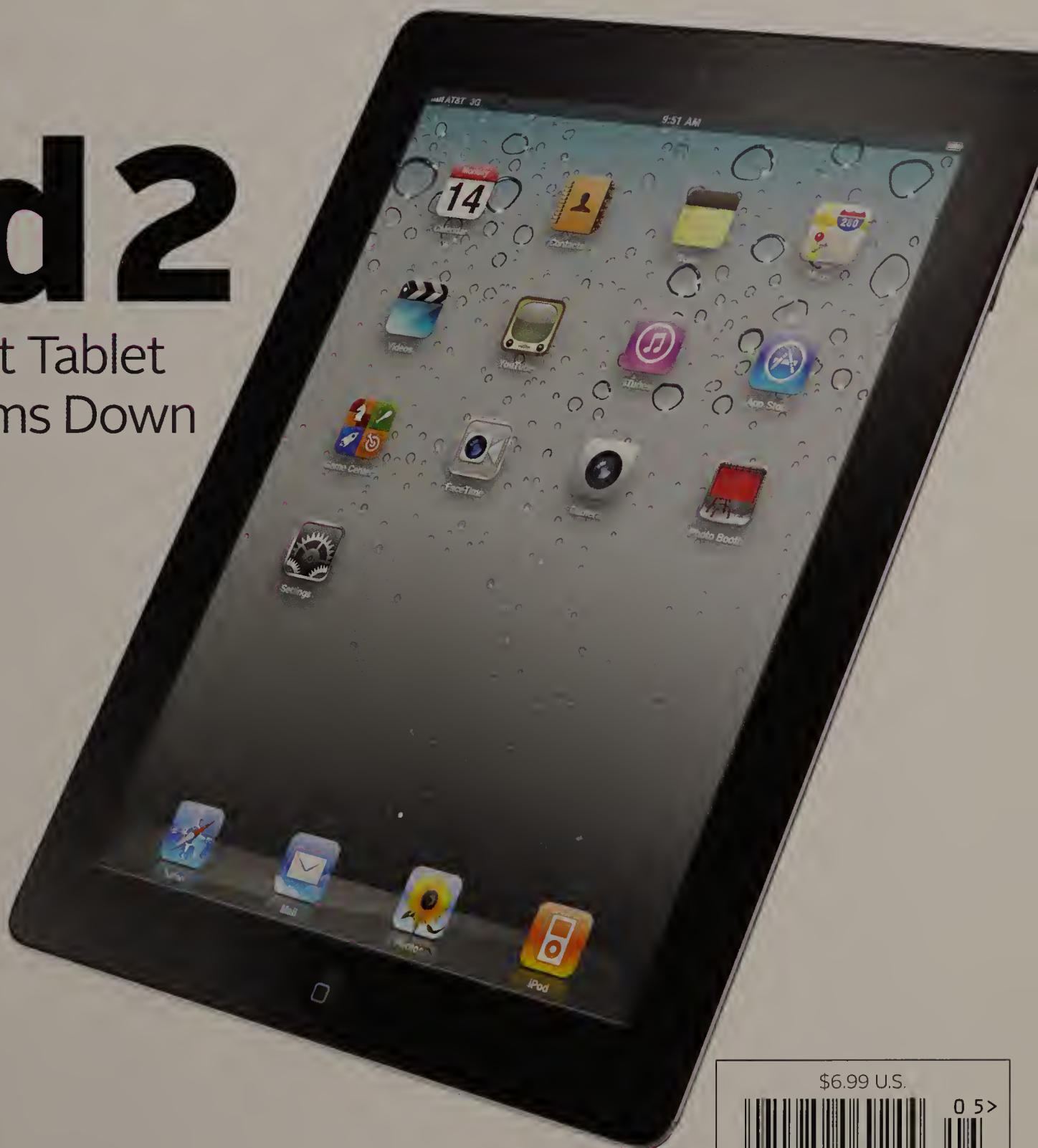
INSIDERS' GUIDE

iPad 2

Apple's Newest Tablet
Speeds Up, Slims Down

PLUS

- iOS 4.3
- GarageBand and iMovie for iPad
- All-New Accessories



Mac App Store: Our 32 Favorites

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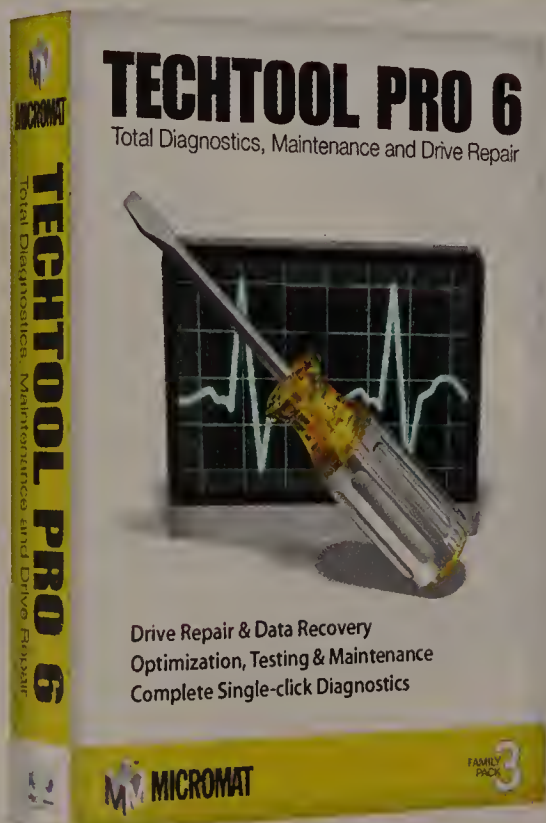
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Review: iPad 2 **30**



44 Mac App Store Favorites



On the Cover
Photograph by Peter Belanger

COVER STORY

30 Review: iPad 2

We review Apple's updated tablet, the iPad Smart Cover, and the GarageBand app. We also offer our take on Apple's latest version of its mobile operating system—iOS 4.3—as well as a first look at iMovie on the iPad.

FEATURE

44 Mac App Store Favorites

Of the more than 1000 apps in the new Mac App Store, these are the 32 we like best.

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The iPad 2 is exciting, no doubt. But the Apple-created apps that were announced alongside it are what's really interesting.

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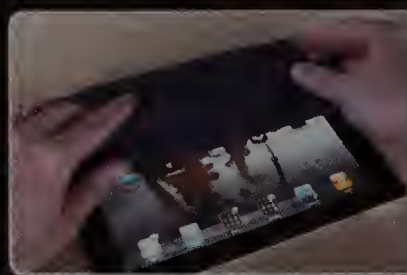
Give picture-in-picture iChat presentations, clear your iPad's memory, and more.

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Sometimes, Apple plays it too safe. And the results can be disappointing.

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**iPad 2: The Video Review**

Jason Snell spent a week with the iPad 2. Here's his video review of Apple's second-generation tablet (macworld.com/7037).

We also recommend:

Podcast: Reviewing the iPad 2 (macworld.com/7038).

Video: Up Close with the iPad 2 (macworld.com/7039).

Podcast: Apple's iPad 2 announcements (macworld.com/7040).

Podcast: MacBook Pro Updates, Thunderbolt, and Lion (macworld.com/7041).



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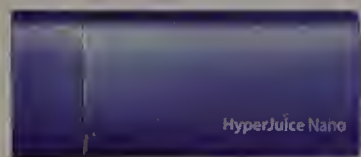
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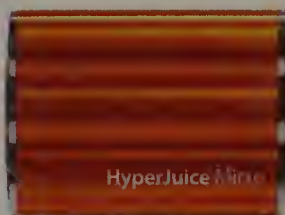
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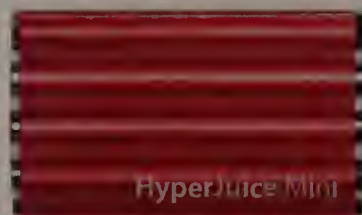
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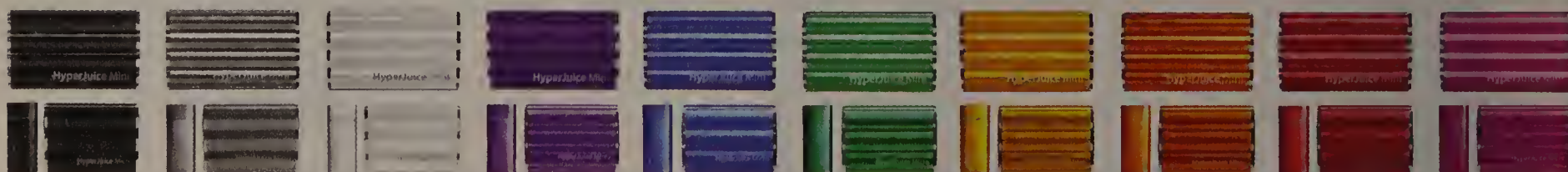


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The App's the Thing

GarageBand and iMovie are (re)built for the iPad 2

The iPad 2 is here. All of you people who refuse to buy the first version of any product can now emerge from hiding and buy an Apple tablet device safely and securely. We've got complete coverage of the new iPad in this issue, starting with my review on page 30. (In fact, I am writing these very words on the touchscreen keyboard of an iPad 2 at 30,000 feet.)

As with all new Apple products, the iPad 2 is fascinating because of the choices the company made about which features to add (cameras and a magnetic case), which ones to change (thickness and weight), and which ones to leave out (an iPhone 4-class Retina display).

But for me, perhaps the most interesting thing about the iPad 2's release was the pair of Apple-created apps that appeared alongside it: GarageBand (which also runs on the original iPad) and iMovie (which ran on other iOS devices, but has now been expanded to run on the iPad 2).

Tapping Out Rhythms

Let's get this clear: I'm no musician. I can play a bit of piano and I can sort of sight-read music. But my musical education ended when I was in my early teens.

Over the years, I've noodled around a bit in the musical corners of GarageBand on the Mac. But I never had as much fun as I did in the first few hours I spent playing with GarageBand on the iPad 2.

The introduction of "smart" instruments and the tactile nature of the iPad make the difference, I think. GarageBand's Smart Instruments eliminate the learning curve usually required to make pleasant sounds: Once I set my song in D major, the smart guitar transformed into eight complementary chords, which I could play by touching the chord name, strumming the strings, or choosing one of four auto-play styles. Within 15 minutes I had created a multilayered track with guitar, bass, organ, and drum parts. (My apologies to



The most interesting thing about the iPad 2's release was the pair of apps that appeared with it.

Fountains of Wayne: I butchered "Hey Julie." But I had fun doing it.)

Now, the tactile thing: To use GarageBand on the Mac, you have to use a mouse or (if you're really cool) a USB keyboard or a guitar with a fancy input. Playing music with a standard keyboard isn't fulfilling. But tapping out chords on an iPad screen, and running your fingers over virtual guitar strings? Fun. It's that simple.

Not that GarageBand on the iPad is frivolous or dumbed down. (Our Christopher Breen, himself a professional musician, loves it too. See his review on page 38.)

Unless you just don't like music, you will never get more for your \$5 than by buying GarageBand for your iPad.

Making Movies

iMovie on the iPhone showed that a simplified video-editing app could work on an iOS device. iMovie on the iPad 2 shows that it doesn't even have to be that simplified. The app actually makes the radical redesign of the Mac version of iMovie make sense. iMovie on the iPad

isn't the same as iMovie on the Mac, but you can tell how the two are related, and I'd imagine that they'll become even more so in the future.

iMovie on the iPad has room for an editing timeline, a preview window, and a view into the iPad's video library, making it easy to pick clips and add them to your project. I was able to piece together a video, trim clips, set transitions, and even record a voice-over in no time at all.

Unfortunately, iMovie can't use video files that aren't in the specific format shot by iOS devices. That will limit its appeal until more cameras start to support the ability to shoot video in formats iOS devices can understand. As a result, I won't be using iMovie on the iPad to edit my home movies just yet. Unless, that is, I ditch my camcorder and just start shooting everything with my iPhone 4.

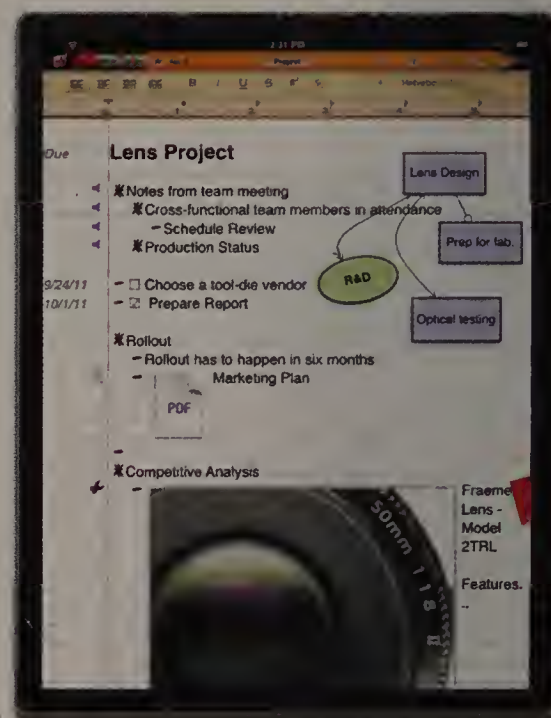
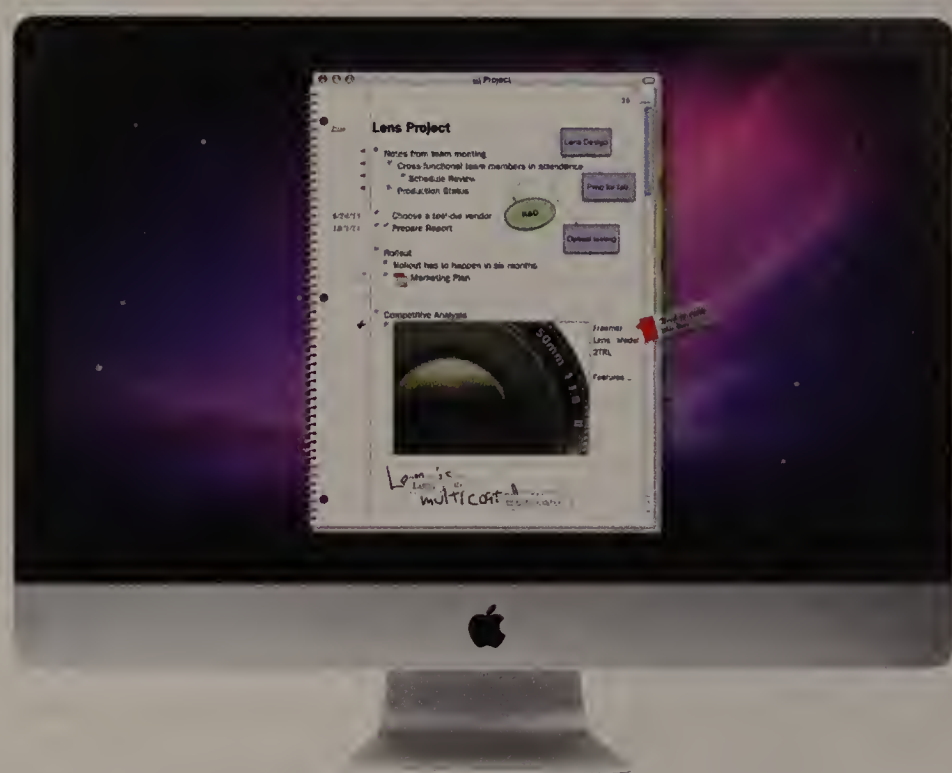
But that quibble aside, let's step back to appreciate what iMovie on the iPad represents. This is a tiny, thin tablet that can edit high-definition video files without breaking a sweat, and then package them up and shoot them off to YouTube or Vimeo. A few years ago my iMac struggled to edit standard-def video. It's amazing the strides Apple has made, and it's no wonder the company chose to release this new version of iMovie to show off the increased power of the iPad 2. It's impressive.

The App Story

These days, so many stories about Apple focus on the success of the App Store, especially the sheer number of apps that are available. With the release of iMovie and GarageBand, Apple is sending a slightly different message: It's not just the number of apps; it's the quality of those apps—and of the devices that run them.

Jason Snell is the editorial director for *Macworld*. E-mail him at jason_snell@macworld.com or follow him on Twitter at twitter.com/jsnell.

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New MacBook Pros Worth the Wait

Laptops feature new Thunderbolt connectivity, dramatic speed increases

BY JAMES GALBRAITH



REVIEW

Nearly a year has passed since Apple refreshed its MacBook Pro line—that's a longer-than-usual gap between updates. But the new MacBook Pros sport several changes under the hood that translate to performance jumps worth the wait.

The new MacBook Pro line consists of five models, all with 4GB of 1333MHz DDR3 memory, 5400-rpm hard drives, and Intel's integrated HD Graphics 3000 processor. The \$1199 13-inch model

has a 2.3GHz dual-core Intel Core i5 processor and a 320GB hard drive. The \$1499 13-inch model has a 2.7GHz dual-core Intel Core i7 processor and a 500GB hard drive. The \$1799 15-inch model has a 2GHz quad-core Intel Core i7 processor, a 500GB hard drive, and a 256MB AMD Radeon HD 6490M discrete graphics processor. The \$2199 15-inch model has a 2.2GHz quad-core Intel Core i7 processor, a 750GB hard

drive, and a 1GB AMD Radeon HD 6750M discrete graphics processor. The \$2499 17-inch model has the same basic specs as the \$2199 15-inch MacBook Pro.

Welcome to Sandy Bridge

Intel's latest Core series of processors, code-named Sandy Bridge, are inside every new MacBook Pro. With the processor, cache, integrated graphics, and memory controller all on the same die, the Core i5 and Core i7 processors

propel the new MacBook Pros well past their predecessors in CPU performance. The Sandy Bridge processors feature Intel's HD Graphics 3000 graphics processor. The 13-inch models rely solely on the HD Graphics 3000, while the 15- and 17-inch models have both the HD Graphics 3000 and discrete AMD Radeon HD graphics processors. Like their predecessors, the Sandy Bridge processors support Hyper Threading, which allows the system to address four virtual cores in the 13-inch models and eight virtual cores in the 15- and 17-inch models. Another technology, Turbo Boost, allows the processors to temporarily speed up when needed. The Sandy Bridge processors are using Turbo Boost 2.0, which Apple says is more efficient than the previous version.

Enter Thunderbolt

The Mini DisplayPort is now a Thunderbolt port, a new connector that looks identical to the Mini DisplayPort. You can still use it to connect to an Apple LED Cinema Display or to Mini DisplayPort adapters, though. (For more on Thunderbolt, see "Thunderbolt: What You Need to Know" on page 16.)

You can daisy-chain up to six devices to the Thunderbolt port, which supplies up to 10 watts of power per channel and offers speeds of up to 10 gbps. However, at the time of this review, Thunderbolt-equipped products have yet to ship, so we couldn't fully test this feature. When Thunderbolt peripherals become available, Macworld Lab will test the speed claims.

You can daisy-chain up to six devices to the Thunderbolt port, which supplies up to 10 watts per channel and up to 10-gbps speeds.

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Like their predecessors, the Sandy Bridge processors support Hyper

Out of iSight

The MacBook Pros feature a new FaceTime HD integrated 720p Webcam, which replaces the iSight Webcam found in the old MacBook Pros.

There is a noticeable difference in image quality between the FaceTime HD Webcam and an iSight Webcam in the old MacBook Pro. When I held up a document to each camera, the text was much easier to read in the FaceTime HD image transmitted from the new MacBook Pro. The text in the image from the iSight was garbled and barely legible. The differences in image quality from each Webcam are subtle when looking at people.

What Hasn't Changed

Everything you see and touch on the MacBook Pros is identical to the last generation. The glossy LED backlit screens each measure 13.3, 15.4, and 17 inches diagonally, with resolutions of 1280 by 800, 1440 by 900, and 1920 by 1200 pixels, respectively. All models



What's Inside The exterior of the MacBook Pro hasn't changed much. All the major changes are under the hood.

feature a full-size, backlit keyboard, and a glass Multi-Touch trackpad with gesture support.

The stereo speakers and built-in microphone remain the same, as do the number of ports on every model: one FireWire 800, one Gigabit Ethernet, a MagSafe power connector, and one audio-in and one audio-out port. The 13- and 15-inch models have two USB 2.0 ports and an SDXC card slot. The 17-inch model has three USB 2.0 ports and an ExpressCard/34 slot.

Performance Boost

We used our system performance test suite, Speedmark 6.5, to measure the overall speed of each MacBook Pro. (For complete benchmark results, go to macworld.com/7028.)

The new 13-inch MacBook Pro with a 2.3GHz dual-core Core i5 processor and a Speedmark 6.5 score of 140 is 35 percent faster than the 13-inch 2.4GHz Core 2 Duo MacBook Pro it replaces.

The next step up in the line, the 13-inch 2.7GHz dual-core Core i7 MacBook Pro, shows less dramatic improvement, scoring a 13 percent gain over the model it replaces, a 13-inch 2.66GHz Core 2 Duo MacBook Pro.

The 13-inch 2.3GHz Core i5 MacBook Pro is 31 percent faster overall than the 13-inch 1.86GHz Core 2 Duo MacBook Air (🔋🔋🔋; macworld.com/6694). The

Pro was faster at processor-intensive tasks, but the Air was faster at disk-based tasks, thanks to the flash storage.

Unlike the 13-inch models of the last generation of MacBook Pros, the new 13-inch models really separate themselves from Apple's entry-level laptop, the \$999 2.4GHz Core 2 Duo MacBook (🔋🔋🔋; macworld.com/6207). Only seven Speedmark points, a FireWire 800 port, and \$200 separated the old 13-inch 2.4GHz Core 2 Duo MacBook Pro and its plastic cousin. But the new 13-inch models are 41 and 56 points faster than the MacBook.

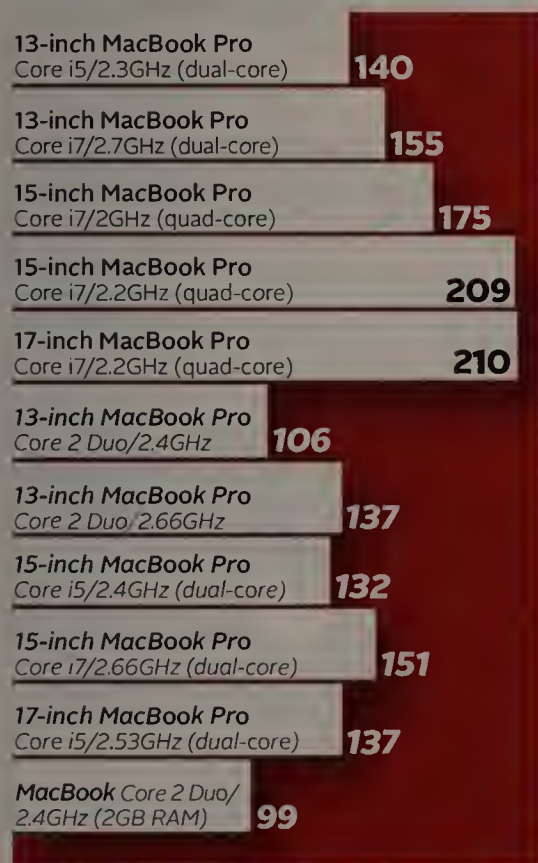
The 15-inch 2GHz quad-core Core i7 MacBook Pro is 33 percent faster than the old 15-inch 2.4GHz dual-core Core i5 MacBook Pro. The 15-inch 2.2GHz quad-core Core i7 MacBook Pro is 38 percent faster than last year's fastest 15-inch model, a 2.66GHz dual-core Core i7 MacBook Pro.

The 17-inch 2.2GHz quad-core Core i7 MacBook Pro is 53 percent faster than last year's largest Mac laptop, a 17-inch 2.53GHz dual-core Core i5 MacBook Pro.

What's even more interesting is how well the MacBook Pros compare performance-wise to the current iMacs. The 15-inch 2GHz Core i7 MacBook Pro beat the 21.5-inch 3.06GHz dual-core Core i3 iMac by one Speedmark point. The 15- and 17-inch 2.2GHz MacBook Pros are about 7 percent faster than the 27-inch 2.8GHz quad-core Core i5 iMac.

Macworld Lab Test

Speedmark 6.5 Test Results



Longer bars are better. Reference systems are in *italics*. Speedmark 6.5 scores are relative to those of a 2.4GHz Core 2 Duo Mac mini (mid-2010) with 2GB of RAM, which is assigned a score of 100. For more on Speedmark 6.5, go to macworld.com/6647.—JAMES GALBRAITH, MAURICIO GRIJALVA, AND WILLIAM WANG

Battery Life

Since the MacBook Pro battery is built in, you can't swap in a fully charged battery. So the amount of time the built-in battery lasts on a charge becomes much more important, and Apple says that the MacBook Pro battery should last up to seven hours. Apple changed its tests for battery life, so it's hard to know whether seven hours is an improvement on last year's MacBook Pros. For the old models, Apple claimed that the 13-inch MacBook Pro had up to ten hours of battery life, and that the 15- and 17-inch models lasted between eight and nine hours.

Macworld Lab performs a quick-drain torture test to gauge battery life in a worst-case scenario. Using QuickTime Player, we loop a movie file that has been ripped from a DVD to the hard drive. We view the movie in full-screen mode with the screen at full brightness, and with AirPort connected. Our battery-life tests



New Connection The Thunderbolt port is identified by a lightning-bolt icon.

differ dramatically from Apple's, so comparing the results to Apple's specification isn't comparing apples to apples.

In our tests, the new MacBook Pros all lasted between 5 hours and 39 minutes (the 17-inch 2.2GHz Core i7 model) and 5 hours and 53 minutes (the 13-inch 2.3GHz Core i5 model). Those results are

better than the results for last year's line.

Both 13-inch MacBook Pros last longer than the older 13-inch 2.66GHz Core 2 Duo MacBook Pro, which lasted 5 hours and 23 minutes. The 13-inch 2.3GHz Core i5 MacBook Pro lasted 30 minutes longer, and the 13-inch 2.7GHz Core i7 MacBook Pro lasted 18 minutes longer.

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More dramatic improvements were found with the 15-inch MacBook Pros. The 15-inch 2GHz Core i7 MacBook Pro lasted 50 minutes longer than the 4 hours and 53 minutes posted by the old 15-inch 2.53GHz Core i5 MacBook Pro. The 2.2GHz Core i7 MacBook Pro lasted 54 minutes longer.

The 17-inch 2.2GHz Core i7 MacBook Pro also showed an impressive improvement, lasting 48 minutes longer than the 4 hours and 51 minutes the old 17-inch 2.53GHz Core i7 MacBook Pro posted.

Macworld's Buying Advice

The new MacBook Pros offer an interesting mix of improvements, familiarity, and compromise. CPU-intensive tasks are appreciably faster, thanks to Intel's Sandy Bridge processors. The screen, keyboard, speakers, and number of ports remain the same, but there's a new Thunderbolt port. (Note that Thunderbolt peripherals that

take advantage of the throughput aren't available yet.) The integrated Intel HD Graphics 3000 processor turns in results that are both slower and similar to the integrated graphics used in last year's MacBook Pros. The AMD Radeon HD 6490M discrete graphics in the 15-inch 2GHz Core i7 model performs similarly to that of last year's 15-inch models, while the graphics performance of the discrete Radeon HD 6750M in the 15- and 17-inch 2.2GHz Core i7 models is much faster than with any other MacBook Pro we've tested.

If you are trying to decide between a \$999 MacBook and an \$1199 13-inch MacBook Pro, the choice is clear: Spend the extra \$200 on the MacBook Pro, which is a much better performer and has more features. The 15-inch 2.2GHz Core i7 MacBook Pro is the model to look at if you want the best combination of size and performance. But if you want a desktop replacement, seriously

consider the 17-inch 2.2GHz Core i7 MacBook Pro.

James Galbraith is Macworld's lab director.

13-Inch MacBook Pro Core i5/2.3GHz (Dual-Core)

★★★★; \$1199; Apple, www.apple.com; full review, macworld.com/7002

13-Inch MacBook Pro Core i7/2.7GHz (Dual-Core)

★★★★; \$1499; Apple, www.apple.com; full review, macworld.com/7003

15-Inch MacBook Pro Core i7/2GHz (Quad-Core)

★★★★; \$1799; Apple, www.apple.com; full review, macworld.com/7004

15-Inch MacBook Pro Core i7/2.2GHz (Quad-Core)

★★★★½; \$2199; Apple, www.apple.com; full review, macworld.com/7005

17-Inch MacBook Pro Core i7/2.2GHz (Quad-Core)

★★★★½; \$2499; Apple, www.apple.com; full review, macworld.com/7006



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Thunderbolt: What You Need to Know

We answer the big questions about Apple's newest connection technology

BY DAN FRAKES AND DAN MOREN

The arrival of Apple's latest MacBook Pro models brings with it a brand-new connection technology called Thunderbolt—which raises a lot of questions about what, exactly, Thunderbolt is and why Apple has chosen to make it the flagship feature. Here's what you need to know about the industry's latest connection standard.

What Is Thunderbolt?

Thunderbolt (previously called Light Peak) is a new peripheral-connection technology, developed by Intel with collaboration from Apple, that combines data, video, audio, and power in a single connection. Based on the PCI Express and DisplayPort architectures, Thunderbolt allows for high-speed connection of peripherals such as hard drives, RAID arrays, video-capture devices, and network interfaces, and it can transmit high-definition video using the DisplayPort protocol. Each Thunderbolt port also provides up to 10 watts of power to connected peripherals.

How Fast Is Thunderbolt?

A Thunderbolt channel can provide up to 10 gbps (gigabits per second) of data throughput—and each Thunderbolt port includes two channels. Thunderbolt is also bidirectional, meaning it can transmit and receive data at the same time. Thunderbolt is many times faster than FireWire 800 and USB 3.0. It's also significantly faster than the eSATA connections available on Windows PCs.

What Are the Other Advantages Over FireWire and USB?

Since Thunderbolt supports data, video, audio, and power, you can use a single Thunderbolt port—and thus a single cable—to connect many of your peripherals. Or at least you'll be able to once enough Thunderbolt-compatible

devices and adapters are available. Conveniently enough, Thunderbolt uses a connector that fits the Mini DisplayPort port on all recent Macs. You connect your Mini DisplayPort-enabled display to the Thunderbolt port.

Is Thunderbolt Backward-Compatible with USB and FireWire?

Third-party vendors will sell adapters (available sometime this spring) that let you connect USB, FireWire 400, and FireWire 800 devices to Thunderbolt ports. Thunderbolt won't make these devices any faster, however—they'll still be limited to the performance of their built-in components.

Can I Connect Multiple Devices to a Single Thunderbolt Port?

You can connect up to six devices to each Thunderbolt port by daisy-chaining them—connecting the first to the Thunderbolt port, connecting the second to the first, and so on. Of course, this requires that each device in the chain have two Thunderbolt ports.

What about Target Disk Mode and Migration Assistant?

On the new MacBook Pro models, you can use Target Disk Mode over a computer-to-computer Thunderbolt connection. (We assume this will be the case with future Thunderbolt-equipped Macs, as well.) However, Mac OS X's Migration Assistant software doesn't currently support Thunderbolt connections.

Will All Macs Get Thunderbolt?

Apple doesn't comment on future products, but the fact that the company has made Thunderbolt a standard feature across the entire MacBook Pro line—even on the entry-level model—is telling. The company has said that it expects

wide adoption of Thunderbolt, and for that to happen, its spread across the Mac line seems like a given. As Apple updates the company's other computer lines over the coming months, we expect to see Thunderbolt added to every Mac model.

Will Thunderbolt Eventually Replace FireWire and USB?

Perhaps, although *eventually* could be a very long time. Thunderbolt is brand new, and as such it will be a while before it becomes anywhere near as commonplace as USB and FireWire. It's expected to be widely adopted by vendors and peripheral makers over the next few years, but until most popular peripherals are available with Thunderbolt connections, we don't expect these legacy connections to disappear entirely from the Mac lines.

Will iOS Devices Get Thunderbolt?

Thunderbolt relies on PCI Express, which is used in Macs and most PCs. iOS devices don't use a PCI Express architecture, which would presumably make it difficult to simply stick a Thunderbolt port on an iPhone. Plus the dock-connector port on iOS devices provides quite a bit of additional functionality—it's got 30 connection pins for a reason, after all. We suspect that it's far more likely Apple will eventually sell an optional Thunderbolt-to-dock-connector cable for charging and syncing.



Thunderbolt: The FAQ

For more information about Thunderbolt, read the full version of this article at macworld.com/7001.

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Software that's just right

Developers Get Early Look at Next OS X

Preview of OS X 10.7 includes a new version of Mail, AirDrop file sharing, and more

BY LEX FRIEDMAN

In late February, Apple released a new developer preview of Mac OS X 10.7, aka Lion, the next incarnation of the Mac operating system. The new version sports a number of features that weren't showcased when Apple offered a sneak preview of Lion back in October.

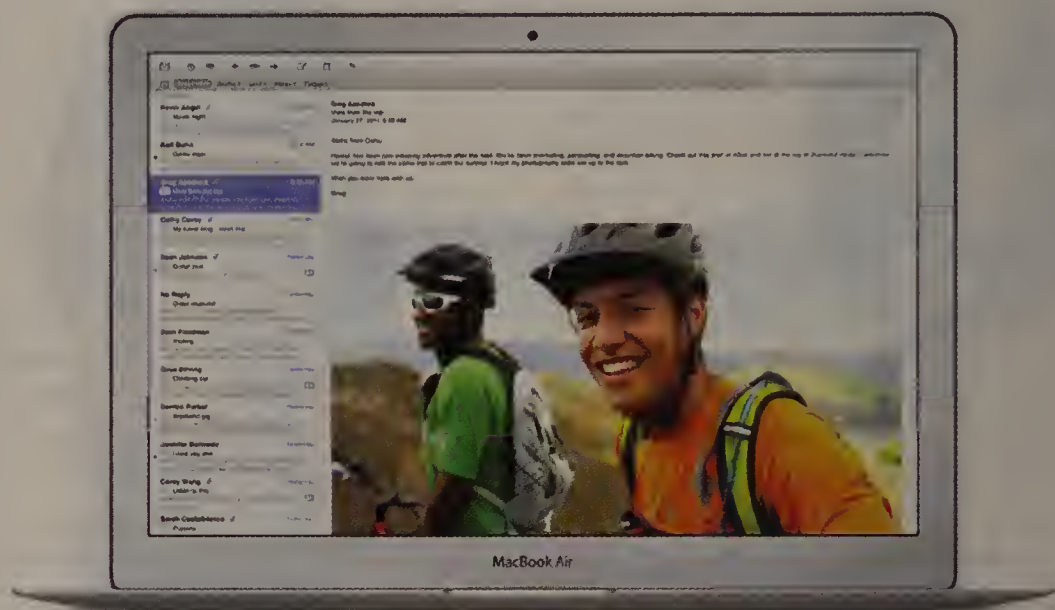
Leading the new feature charge is AirDrop, which sounds like a Dropbox alternative. In press materials announcing the developer release, Apple describes AirDrop as "a remarkably simple way to copy files wirelessly from one Mac to another with no setup."

Another new feature called Versions promises to automatically save successive versions of a document as that document is created, which Apple says will make it easier to revert to previous versions of a file. Versions automatically records a history of changes made to your documents and lets your app display a Time Machine-like interface so you can browse through previous versions. The Versions feature seemingly dovetails nicely with Auto Save, which automatically saves documents as you work.

Also new is Resume, which re-creates the last state of your apps when you relaunch them or restart your Mac, much like multitasking apps do under iOS 4.

The iOS similarity is no accident. Apple has touted Lion as an operating system that takes the best features of its mobile OS and delivers them to the desktop. Not surprisingly, Lion's look and feel will differ a bit from previous incarnations of OS X. Several iPad interface elements—pop-overs and overlay scrollbars among them—will make the leap to the Mac, in what Apple (nostalgically) calls Lion's Aqua experience.

Lion also offers full-screen support for applications, as well as support for new multitouch gestures such as swiping and pinch-to-zoom on Web pages. The latter is a particular focus of Lion, according to



New Version of Mail The latest developer preview of Lion includes Mail 5, which features a user interface that's similar to that of its iPad counterpart.

Apple. "Full-screen experiences are a very important part of what we're doing with Mac OS X Lion," says Apple's Wiley Hodges, director of Mac OS X Product Marketing. "We've had it in the past, but we're making it systemwide now."

Other previously announced features include Mission Control, which provides a view of open full-screen apps, and Launchpad, which displays apps on screen in a fashion similar to the way they are displayed on the iPhone. There's also a revamped version of FileVault for securing all your data on both internal and external devices, and it allows you to quickly wipe those drives if you need to.

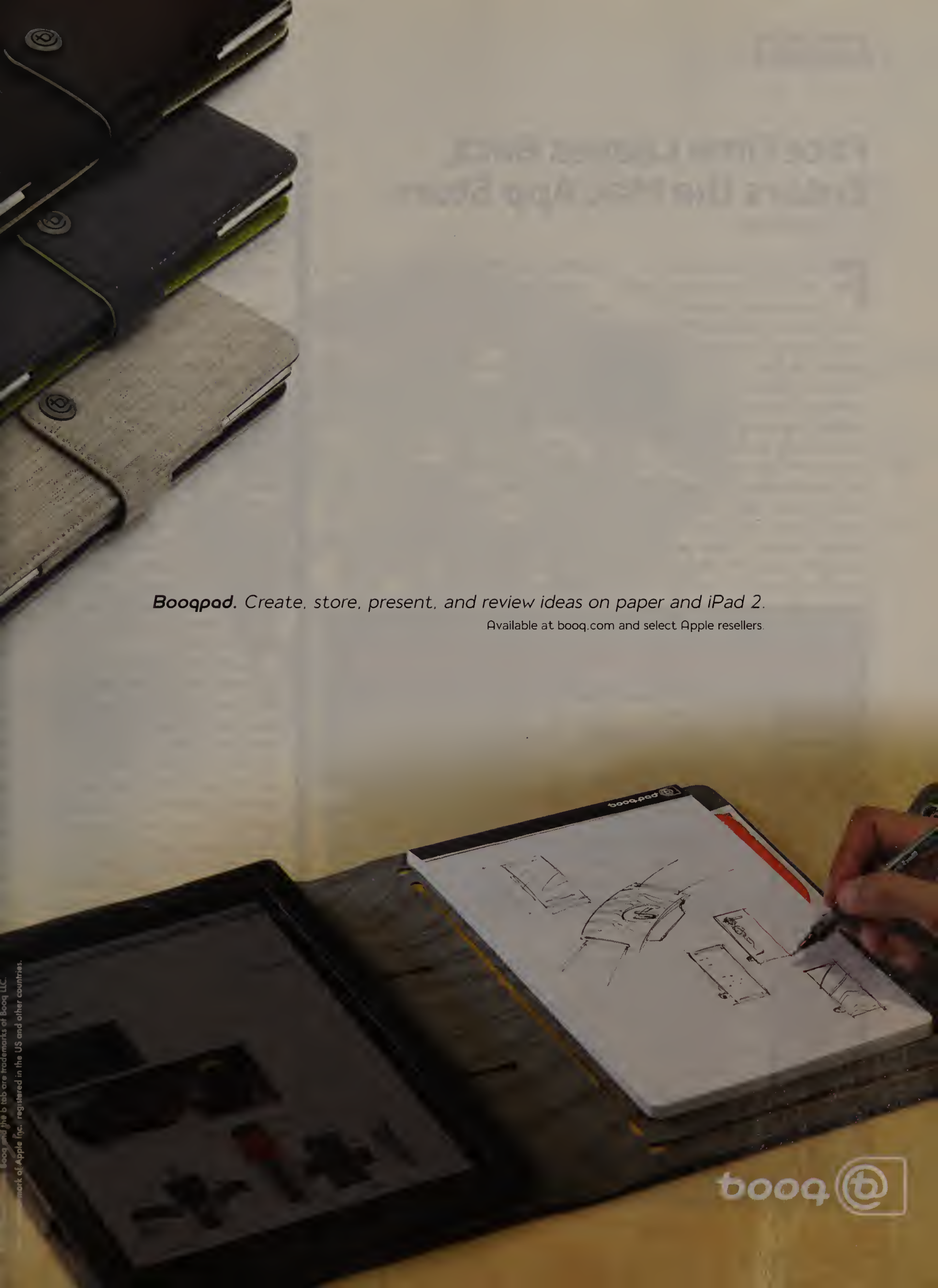
Other new features that Apple disclosed include version 5 of Mail, which will bring the iPad's layout for managing your e-mail to the desktop. Message previews run down the narrower left pane, with the full message body on the right side. Apple says that Mail 5 will also sport a new way to quickly search even the largest inboxes. A new Conversations view in Mail 5 doesn't just offer traditional conversation threading; it can also keep track of e-mail threads even when subject lines change.

It also adds support for Microsoft's Exchange 2010 protocol.

Instead of offering a separate server version of Lion, Apple is building Lion Server directly into the OS. Lion Server guides you through the configuration of your Mac as a server, and it provides tools for both local and remote administration. The new Profile Manager will make it simple for server administrators to remotely set up and manage OS X 10.7 installations, along with iOS devices. Wiki Server 3 and easier file sharing for the iPad are both also part of Lion Server.

Registered Mac Developer Program members can get Lion directly from the Mac App Store. The final version of Lion will be available to everyone this summer, according to Apple.

"The iPad has inspired a new generation of innovative features in Lion," said Phil Schiller, Apple's senior vice president of worldwide product marketing, in a statement announcing the developer release. "Developers are going to love Mission Control and Launchpad, and can now start adding great new Lion features like full screen, gestures, Versions and Auto Save to their own apps."



Booqpad. Create, store, present, and review ideas on paper and iPad 2.

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FaceTime Leaves Beta, Enters the Mac App Store

BY LEX FRIEDMAN

FaceTime for Mac, Apple's video-chat client for communicating between Macs and iOS

devices, has been finalized and has landed squarely in the Mac App Store for \$1.

Apple introduced FaceTime for the Mac last October. The 1.0 release in the Mac App Store doesn't introduce too many new features, but the few additions are certainly welcome.

Chief among those new features is support for HD video: Supported Intel Macs can receive HD video, and new Macs with built-in HD FaceTime cameras can send HD video. Also new

in FaceTime 1.0 is the ability to add and edit contacts from within the app.

FaceTime requires Mac OS X 10.6.6 or later. Video calls require a built-in FaceTime camera, a built-in or external iSight camera, a USB video class (UVC) camera, or a FireWire DV camcorder; and a



128-kbps-upstream and -downstream Internet connection. Making HD video calls requires a built-in FaceTime HD camera and a 1-mbps (both upstream and downstream) Internet connection. Receiving HD video calls requires a supported Intel-based Mac.

Apple Shareholders Reject Public Succession Plan

BY CHRIS HOLT

Apple's board of directors won't be required to publicly disclose its plans for CEO succession, after shareholders voted down a proposal at February's annual company meeting.

In light of Apple CEO Steve Jobs's medical leave of absence, his health attracted a fair number of questions. The proposal would have authorized Apple's board to develop internal candidates, develop criteria for the CEO position, and begin planning for nonemergency CEO succession at least three years before an expected transition. The plan also called for the board to produce an annual report, to be presented to the shareholders, on a succession plan.

Jennifer O'Dell of the Laborers' International Union of North America had argued for a public succession plan, citing the shareholders' need to know how "Apple would handle a CEO vacancy." The proposal, she added, would not have disclosed which candidates the company was looking at in a proposed succession plan, but would ensure that the company would "be on sure footing" should the CEO position be vacated.

Apple's board of directors opposed the succession plan proposal, arguing that it already has a formal process in place and that revealing its plans publicly would play into competitors' hands.

Jobs's health was a frequent topic during the question-and-answer portion of the meeting. Chief Operating Officer Tim Cook, who is handling Jobs's day-to-day duties during his absence, and Bruce Sewell, Apple senior vice president and general counsel, did not elaborate further on the status of the CEO's health.

Macs: Current Lineup

PRODUCT	SPECS	RATING	PRICE	DISPLAY	SPEED-MARK 6.5 ^A	FIND CODE ^B
DESKTOP						
iMac 	Intel Core i3/3.06GHz	★★★★	\$1199	21.5 inches	174	6432
	Intel Core i3/3.2GHz	★★★★	\$1499	21.5 inches	179	6433
	Intel Core i3/3.2GHz	★★★★	\$1699	27 inches	177	6434
	Intel Core i5/2.8GHz quad-core	★★★★	\$1999	27 inches	196	6435
Mac Mini 	Intel Core 2 Duo/2.4GHz	★★★★	\$699	not included	100	6304
Mac Pro 	Intel Xeon/2.8GHz (quad-core)	★★★★	\$2499	not included	207	6458
	Intel Xeon/2.4GHz (eight-core)	★★★★	\$3499	not included	216	6459
	Intel Xeon/2.66GHz (12-core)	★★★★	\$4999	not included	261	6460
PORTABLE						
MacBook 	Intel Core 2 Duo/2.4GHz (white)	★★★★	\$999	13 inches	99	6207
MacBook Air 	Intel Core 2 Duo/1.4GHz, 64GB	★★★★↓	\$999	11 inches	85	6692
	Intel Core 2 Duo/1.4GHz, 128GB	★★★★↓	\$1199	11 inches	84	6691
	Intel Core 2 Duo/1.86GHz, 128GB	★★★★	\$1299	13 inches	108	6694
	Intel Core 2 Duo/1.86GHz, 256GB	★★★★	\$1599	13 inches	108	6693
MacBook Pro 	Intel Core i5/2.3GHz (dual-core)	★★★★	\$1199	13 inches	140	7002
	Intel Core i7/2.7GHz (dual-core)	★★★★	\$1499	13 inches	155	7003
	Intel Core i7/2GHz (quad-core)	★★★★	\$1799	15 inches	175	7004
	Intel Core i7/2.2GHz (quad-core)	★★★★↓	\$2199	15 inches	209	7005
	Intel Core i7/2.2GHz (quad-core)	★★★★↓	\$2499	17 inches	210	7006

^A Speedmark 6.5 is Macworld Lab's standard test tool for benchmarking systems running Mac OS X 10.6 (Snow Leopard). For more information on Speedmark testing, go to macworld.com/6647. ^B In a browser's address field, typing in a find code after macworld.com/ takes you to a product's review or overview.



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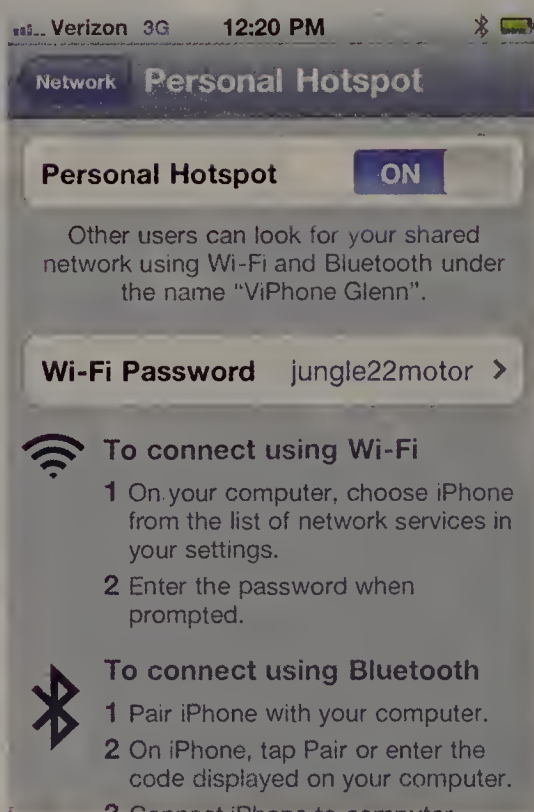
Using the iPhone's Personal Hotspot

New iOS feature turns your phone into a portable wireless router

BY GLENN FLEISHMAN

Throw away your MiFi! Forgo the heartbreak of tethering. Give up the struggle of Internet sharing from a mobile broadband modem through your laptop. The iPhone's Personal Hotspot feature can slice (through your mobile bill), dice (up your cables), and let pounds and pounds of Wi-Fi devices connect to the Internet.

Personal Hotspot turns your iPhone 4 into a portable wireless router that can share its Internet connection with other devices. This feature debuted with the Verizon iPhone release in February and became available to AT&T iPhones with the iOS 4.3 update. (For more on iOS 4.3, see our review of the iPad 2 on page 30.) Up to five pieces of hardware that have standard Wi-Fi adapters can connect to the iPhone's micro base station if you use Verizon's iPhone 4. (AT&T's iPhone also allows for five connections, though only three of those



feature to Data Pro plan subscribers. It costs an additional \$20 per month, but its 2GB of data are added to the 2GB of data



Personal Hotspot turns your iPhone into a portable wireless router that can share its Internet connection with other devices.

can be via Wi-Fi.) Here's how to put Personal Hotspot to work for you.

Getting Started

Setup and use is simple. First, you need to sign up for the service with your carrier. Verizon charges \$20 per month for Personal Hotspot and includes a 2GB pool of data that's separate from the data you pay for to send e-mail, surf the Web, and use apps. Additional gigabytes are \$20 each. AT&T offers the Personal Hotspot

included with your service plan. Additional gigabytes cost \$10 each.

With your plan enabled, launch Settings, and tap General ► Network ► Personal Hotspot. After you turn on the hotspot for the first time, the Personal Hotspot item will then appear at the top level of the Settings app.

Securing Your Hotspot

Apple requires a password for the hotspot Wi-Fi network. You'll be grateful

for this, because it means that you can't accidentally open the network to anyone and have them run up a huge data bill. The password Apple prefills is unique, easy to remember, and quite strong: a word and a number for AT&T, or a word, number, and word for Verizon. You can replace that password by tapping in the field. A password must be at least eight characters long (a mix of letters, numbers, and punctuation).

You can share simultaneously through USB, Bluetooth, and Wi-Fi, but you can selectively disable any of these wireless methods. Disable Bluetooth (Settings ► General ► Bluetooth) or Wi-Fi (Settings ► Wi-Fi), and you will reduce battery usage a bit, as well as quiet the radio environment around you. When you flip Personal Hotspot to On, it will ask you if you

want to enable Bluetooth or Wi-Fi if either is turned off. USB is always available, but you can enable and disable USB tethering on the computer side via the Network preference pane—even when you have an iPhone plugged in for charging or syncing.

How It Works

A blue bar appears at the top of the phone's screen when a device is connected to the hotspot, much like the green bar that shows an active call when you're not in the phone app. Tap the bar to open the Personal Hotspot settings screen. The bar displays a count of the connected devices, including ones connected via USB and Bluetooth. Because a computer or other device sees your Personal Hotspot as just another Wi-Fi connection, you can carry out any task and use any service. This includes

FaceTime on an iPhone or iPod touch relayed through the hotspot.

Managing Your Hotspot

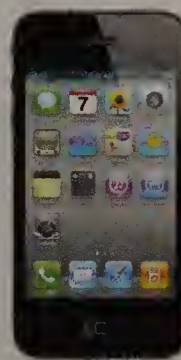
If a phone call comes in while you're using the hotspot feature, the Verizon iPhone keeps all devices connected but suspends Internet access until you accept or reject the call (GSM phones keep the data connection live). Answer the call, and the hotspot stays active without Internet service; the Net comes back when you hang up. Reject the call, and Net access resumes.

When you're ready to turn the hotspot feature off, use Settings to tap the Off button in the Personal Hotspot item.

Glenn Fleishman is a senior contributor for *Macworld*, and the author of the recently updated *Take Control of iPhone and iPod Touch Networking and Security*, iOS 4 edition (TidBits Publishing, 2011).

A Tale of Two iPhones: Same Tasks Handled Different Ways

BY LEX FRIEDMAN



All iPhones aren't created equal. But a recent support document from Apple that outlines the differences between the CDMA (Verizon) and GSM (AT&T) iPhones illustrates

just how differently the phones handle even the most mundane of tasks (see the entire document at macworld.com/6963).



> On a GSM iPhone, to turn Call Forwarding, Call Waiting, and Caller ID on or off, you launch the Settings app, tap Phone, and then adjust the appropriate control. Changing those same settings on a CDMA phone, however, requires dialing special codes—*72, *70, and *67, respectively.

> When it comes to conference calls, GSM iPhones can support up to five simultaneous calls, while CDMA iPhones top out at two simultaneous calls. Also, CDMA phones can't merge calls if the second call is incoming, nor can they switch between calls if the second call was outgoing.

> The phones used to handle dialing pauses differently. (Pauses are useful when you call into an automated phone system.) After the iOS 4.3 update, the feature works the same on both CDMA and GSM phones. Tap and hold # when dialing. When editing a contact number, tap +*# and then tap Wait.

So, why all these differences? Because CDMA networks package up data—your voice calls and your Internet usage—very differently from GSM phones, thanks to differences in the core technical makeup of each network.

iOS Devices: Current Lineup

PRODUCT	SPECS	RATING	PRICE ^A	DISPLAY	PERFORMANCE	FIND CODE ^B
 iPad 2 ^C	16GB	Wi-Fi,  ; 3G, 	Wi-Fi, \$499; 3G, \$629	9.7-inch color	Up to 10 hours on Wi-Fi; up to 9 hours on 3G	7030 Wi-Fi 7031 3G
	32GB	Wi-Fi,  ; 3G, 	Wi-Fi, \$599; 3G, \$729	9.7-inch color	Up to 10 hours on Wi-Fi; up to 9 hours on 3G	7032 Wi-Fi 7033 3G
	64GB	Wi-Fi,  ; 3G, 	Wi-Fi, \$699; 3G, \$829	9.7-inch color	Up to 10 hours on Wi-Fi; up to 9 hours on 3G	7034 Wi-Fi 7035 3G
 iPhone 3GS and 4	8GB 3GS (AT&T)		\$99	3.5-inch color	9 hours of Wi-Fi Internet; 5 hours of 3G talk time	6255
	16GB 4 (AT&T)		\$199	3.5-inch color (Retina)	10 hours of Wi-Fi Internet; 7 hours of 3G talk time	6256
	32GB 4 (AT&T)		\$299	3.5-inch color (Retina)	10 hours of Wi-Fi Internet; 7 hours of 3G talk time	6257
	16GB 4 (Verizon)		\$199	3.5-inch color (Retina)	10 hours of Wi-Fi Internet; 7 hours of 3G talk time	6943
	32GB 4 (Verizon)		\$299	3.5-inch color (Retina)	10 hours of Wi-Fi Internet; 7 hours of 3G talk time	6944
 iPod Touch	8GB		\$229	3.5-inch color (Retina)	40 hours of music playback; 7 hours of video playback	6553
	32GB		\$299	3.5-inch color (Retina)	40 hours of music playback; 7 hours of video playback	6554
	64GB		\$399	3.5-inch color (Retina)	40 hours of music playback; 7 hours of video playback	6555

^AAll prices are Apple's prices. ^BIn a browser's address field, typing in a find code after macworld.com/ takes you to a product's review or overview. There are separate Wi-Fi+3G iPad 2 models for AT&T's network and for Verizon's.

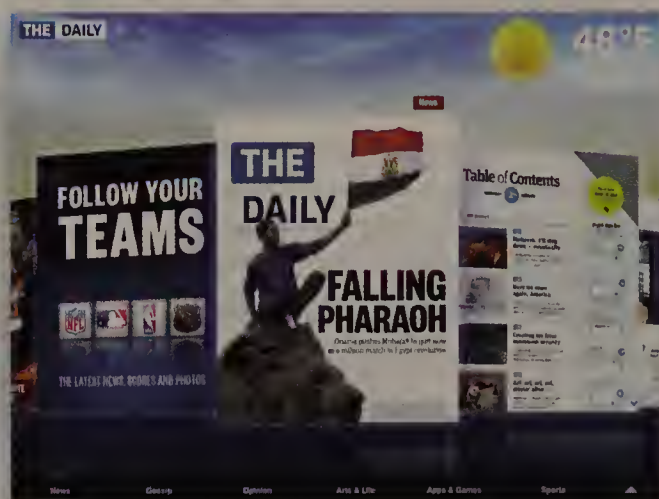
Apple's Subscription Rules Anger, Entice Publishers

BY DAVID CHARTIER AND JOEL MATHIS

Apple has rolled out a new policy that allows apps to offer subscriptions to users. But some publishers are crying foul over the size of Apple's take.

Under Apple's rules, publishers can charge subscriptions on a weekly, monthly, bimonthly, quarterly, semiannually, or yearly basis, and customers can sign up via in-app purchases that get automatically billed and renewed on their iTunes accounts. With this method, Apple takes 30 percent of subscription fees. Publishers are also free to make their subscriptions available outside of their apps. If customers sign up that way, publishers get to keep 100 percent of their subscription fees, but they can't provide in-app links to let customers sign up outside their apps. Those in-app subscription prices must remain either the same or less than their outside-app counterpart offers.

Some publishers have blasted Apple's new policy, which goes into effect in June. John Irwin, president of subscription music service Rhapsody,



calls the arrangement "economically untenable."

But the lure of iPad users subscribing to digital versions of magazines may prove too alluring for publishers. "Of course we would always like to see a lower commission, but we are able to work with this commission rate at this time," says Philippe Guelton, chief operating officer of Hachette Filipacchi Media U.S., the publisher of *Elle*. "The cost of developing our own e-commerce platform is not economically viable. Apple is offering a great turnkey tool that allows us to test with little to no financial risk."

SPOTLIGHT ON IPHONE 4 CASES

Tekkeon MyPower

While not every iPhone 4 case will fit both the Verizon (CDMA) and AT&T (GSM) versions of Apple's smartphone, Tekkeon's myPower for iPhone 4 (macworld.com/6966) doesn't have that problem. The \$80 battery case works with both CDMA and GSM iPhones. The hard plastic case with raised edges—all the better for protecting the phone from face-down drops—features Tekkeon's eSwap technology, which allows you to swap out the case's battery for a fresh one. With enough extra batteries (\$25 each), you could use your iPhone without having to charge it up for a very long time.—DAVID DAHLQUIST



What's New at the App Store



Echofon Adds Mute, Image Previews

Echofon updated both the free (macworld.com/6961) and \$5 pro (macworld.com/6962) versions of its mobile Twitter client, adding a mute switch. The feature lets you mute any hashtag, application, or user. On the iPad, Echofon now supports the Twitter Stream—the real-time flow of tweets, in which they appear as soon as they get published. Meanwhile, iPhone users can now see image previews in the timeline, previously an iPad-only perk.—DAVID CHARTIER



Premium Layers Now Part of Adobe Ideas

Adobe apparently has some new ideas for Ideas (macworld.com/6964), the company's free iOS vector-drawing app. The most significant addition in version 1.2 is the arrival of layers as a \$5 in-app purchase. Users can have up to ten layers, as well as an additional photo layer for each sketch. Other additions to Adobe Ideas include improved panning and zooming, and support for Apple's VGA adapter so that you can display sketches on the big screen.

—DANNY GALLAGHER



Video-Out Comes to Box.net

Box.net is jazzing up its iPhone and iPad app (macworld.com/6965) with support for video-out via accessories like Apple's Dock Connector to VGA Adapter. But there's a twist—Box.net projects only what is displayed in its content area, helping users give a clean presentation. Other changes introduced in the 2.4 update include AirPrint support and additional security and authentication options.—DAVID CHARTIER

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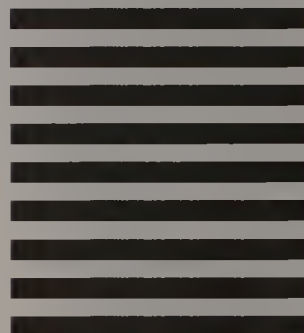
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(BR700G shown above)

The energy-efficient ES 750G

The Back-UPS ES 750G boasts innovative power-saving outlets, which automatically shut off power to unused devices when your computer is turned off or is in standby, eliminating wasteful electricity drains.

- 10 Outlets • 750 VA/450 Watts
- 70 Minutes Maximum Runtime
- Coax and Telephone/Network Surge Protection



The best-value ES 550G

The Back-UPS ES 550 uses an ultra-efficient design that consumes less power during normal operation than any other battery backup in its class, saving you money on your electricity bill.

- 8 Outlets • 550 VA/330 Watts
- 43 minutes maximum runtime
- Telephone Surge Protection



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by Schneider Electric

APP GUIDE

Software for Your iPhone, iPod Touch, and iPad

Seline HD

MUSIC Anyone who enjoys making music will find plenty to like about this multivoice synthesizer and its loads of interesting audio (and visual) effects. While it features a keyboard-like interface, Seline HD abandons the standard piano metaphor for what the developers call the "ioGrid," which provides 16 notes organized in gridlike fashion. Each key plays one note in one of 25 available scales using any of 23 voices. Expression controls, virtual knobs, and joysticks further help you produce your own unique sound. It truly is an app you need to see—and hear—in action to fully appreciate.—**BRIAN BEAM**

iPad | ; \$10; Amidio; macworld.com/6968



Canned 1.3

CHAT If you find yourself sending the same text messages over and over—say, a quick note to your spouse to say that you're running late—Canned, with its ability to store precomposed SMS messages, may come in handy. The app takes advantage of iOS 4's in-app SMS feature in which an SMS pane slides up and fills in the contacts and your message. All you need to do is tap send. Whether you need to send a text to an individual or multiple recipients, Canned can be a huge timesaver.

—**BEAU COLBURN**

iPhone | ; \$1; Sky Balloon; macworld.com/6971



Legendary Wars 1.2.3

GAMES Other iPhone games may top Legendary Wars in graphics, sound, and storyline, but few match this medieval strategy game's unique and enjoyable gaming experience. You control an army of knights, elves, and dwarves in the fight

against an array of undead creatures across a series of levels. But the objectives and the way they must be attained change from level to level. That makes Legendary Wars a clever cross between a typical castle-defense game, a strategy title, and a side-scroller that always keeps things interesting for the iPhone gamer.—**MARCO TABINI**


iPhone | ; \$2; Liv Games; macworld.com/6970

APP GEMS

Photo-Sharing Apps



Bill Atkinson Photo

Card  Turn your photos into customized postcards with the app from this Apple vet (macworld.com/6026).



Diptic 

macworld.com/6591



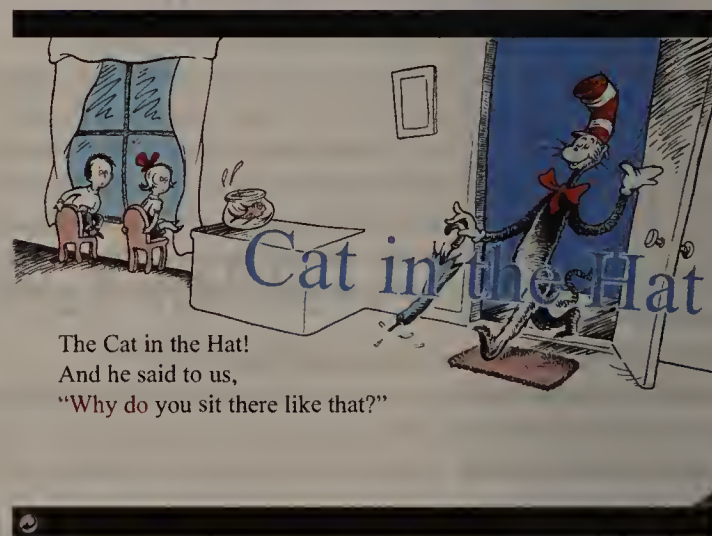
Instagram 

macworld.com/6727

Find more photography apps at macworld.com/4910.


The Cat in the Hat 1.08

EDUCATION You've never heard the Dr. Seuss classic the way Oceanhouse Media re-creates it for Apple's iOS devices. Tap any object on the screen, and its name pops up on screen, usually spoken in a character's voice. The app offers several modes, including



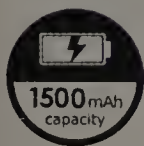
The Cat in the Hat!
And he said to us,
"Why do you sit there like that?"

one that lets you—or your child—read aloud as the text appears on screen. Rather than using extraneous motion, the app slowly enlarges images from *The Cat in the Hat*, putting the focus on the great work of Ted Geisel.—**GLENN FLEISHMAN**

iPhone/iPad | ; \$4; Oceanhouse Media; macworld.com/6969

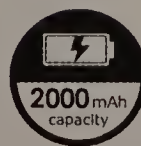


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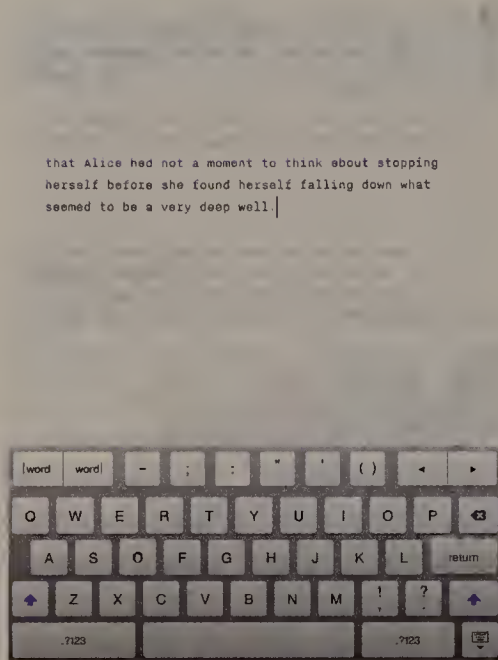
juice pack air™ made for iPhone® 4

The juice pack air™ offers you the convenience of a fully protective hard-shell case with virtually twice the battery life of the iPhone alone; all in an ultra-thin, light-weight, low-profile design.



juice pack plus™ made for iPhone® 4

The juice pack plus™ more than doubles the battery life of your iPhone with its built-in 2000mAh rechargeable battery. The comfortable dual-injected design gives your iPhone the complete protection of a hard shell case with a shock-proof rubberized band, making it the most powerful juice pack ever.



iA Writer 1.2.1

PRODUCTIVITY Using iA Writer isn't a cure-all for procrastination, but the app does do its part to help you stay focused. An elegantly simple interface removes all but the essential features—a menu bar and keyboard. Use the Focus Mode, and the header and scrollbar disappear, and functions like the spelling checker are disabled. Instead, all text but the three lines you're currently writing in become grayed out, allowing you to push through on that last paragraph or section.—**LEX FRIEDMAN**
 iPad | ; \$1; Information Architects; macworld.com/6729

ESSENTIAL APPS

The Happiest Apps on Earth

Planning a trip to the Magic Kingdom? Let these apps show you around (macworld.com/6979).

Disneyland MouseWait Get live ride wait times delivered to your phone.

Disneyland iGuide—Walkee Decide what you want to see before you even arrive.

Disneyland Dining Man cannot live by rides alone; track down food anywhere in the park.

Disneyland Maps Get from Adventureland to Fantasyland with no fuss.

Total Baby 2.0.6

LIFESTYLE An excellent tool for staying on top of feedings and diaper changes, Total Baby meets the baseline criteria for any app aimed at new parents—it can be operated with only one hand by someone who's operating on approximately 90 minutes of sleep per night. But what really makes this app useful are the thoughtful design touches—from easily tappable buttons for logging nursing sessions to handy scrolling options for noting diaper contents. The time function can drain your battery if you're not careful, but backing up and exporting data is ridiculously easy.—**LISA SCHMEISER**
 iPhone | ; \$5; Andesigned; macworld.com/6972



Asphalt 6: Adrenaline 1.1.6

GAMES Exotic cars racing in exotic locations help set the latest entry in the Asphalt racing series apart from similar apps. What Gameloft has packed into this graphically intensive and content-rich game, with various racing challenges that are different enough to ensure that Asphalt 6 never gets repetitive, is truly impressive.—**SAM FELSING**
 iPhone | ; \$5; Gameloft; macworld.com/6973

More Reviews

See more iPhone, iPad, and iPod touch apps we've tested at [iOS Central \(macworld.com/4164\)](http://iOS Central (macworld.com/4164)).

APPLICATION	DESCRIPTION	PRICE	RATING	FIND CODE*
EasyTrails GPS 4.2 Zirak	GPS tracking app	\$4		6974
Flickpad Pro 2.4 Shacked Software	iPad photo browser	\$3		6975
GateGuru 2.1.1 Mobility Apps	airport terminal-mapping app	free		6976
NBA Jam EA Sports	arcade classic	\$5		6977
PhotoCopier 2.0.1 Digital Film Tools	iPad, iPhone image editor	\$2		6978

* In a browser's address bar, typing a find code after macworld.com/ directs you to a product's review or overview. For example, macworld.com/6974 takes you to our review of EasyTrails GPS.

App Guide

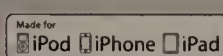
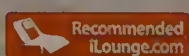
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REVIEW

iPAD 2

APPLE'S UPDATED TABLET IS FASTER, LIGHTER, THINNER

A year ago, nobody had an iPad (🍏🍏🍏; macworld.com/7052). Then Apple sold 15 million of them in just nine months—and created a whole new category of technology product. The iPad may indeed be, in the words of Steve Jobs, “the most successful consumer product ever launched.”

It might be hard to follow such a massive success, but the iPad 2 is faster, smaller, and lighter than the model introduced a year ago—all while retaining the \$499 entry price.

by

JASON SNELL

PHOTOGRAPHY BY
PETER BELANGER



WHAT HASN'T CHANGED

At first glance, the iPad 2 is very much like the original. Its front is a sheet of glass over a bright 1024-by-768-pixel display surrounded by a bezel (now available in black or white). The aluminum frame around the outside is still there, but it has been reduced to a thin, almost invisible edge.

The position of the iPad 2's buttons and ports are, likewise, more or less undisturbed. There's a sleep/wake button on the top edge; a standard headphone jack at top left; a volume rocker and a sliding switch (which can either lock the screen orientation or mute alert sounds, depending on what you select in the Settings app) at the top right; a home button at the bottom of the front face; and a 30-pin dock connector port below that.

The iPad 2 repositions the built-in microphone from next to the headphone jack to dead center at the top edge. Both 3G models feature a black plastic cutout along the top rear face in order to improve cellular reception; the AT&T 3G model also has a micro-SIM card slot along the top left edge.

A GAME OF INCHES

Beyond the superficial similarities, the iPad 2 really is a different device. Start with its dimensions. The iPad 2 measures 7.31 by 9.5 by 0.34 inches and weighs 1.33 pounds. (That's the Wi-Fi-



iPAD 2



PROS: Thin and light; faster than first iPad; HD video-out; video mirroring.

CONS: Camera's video is low quality.

PRICE: \$499 (16GB, Wi-Fi only), \$599 (32GB, Wi-Fi only), \$629 (16GB, Wi-Fi/3G), \$699 (64GB, Wi-Fi only), \$729 (32GB, Wi-Fi/3G), \$829 (64GB, Wi-Fi/3G)

COMPANY: Apple, www.apple.com

FULL REVIEW: macworld.com/7053

only version; the AT&T and Verizon 3G versions are .01 and .02 pound heavier, respectively.) That makes the iPad 2 0.16 inch narrower, 0.06 inch shorter, and 0.16 inch thinner than the original; it's also 0.17 pound lighter (or 0.26 to 0.27 pound for the 3G models).

Those changes might sound trivial, until you put it this way: The iPad 2 is about two-thirds the thickness of the original iPad, and 83 to 88 percent as heavy. Pick up an iPad 2 after handling the old one, and you'll notice the difference right away.

To shave that 0.16 inch of thickness, Apple has transformed the iPad's back panel. The original model's back had

four flat edges and a gently curved back surface. The iPad 2 opts instead for a single surface that transitions rapidly from curve to flat.

Without the flat edges, the iPad 2's ports and buttons are now positioned on a curving portion of the back panel. At times, I found that confounding, as I tried to plug cables into the iPad 2's dock connector at the appropriate angle.

Because it's slimmer, the iPad 2 is easier to handle than the original. Where I initially found the first iPad difficult to hold in one hand, it's easy with the iPad 2—unless you use the iPad for extended periods (for reading, say). In that case, you'll need to prop it up.

DUAL-CORE SPEED

The iPad 2 uses a new Apple-designed processor called the A5. Apple is generally cagey about tech specs for products like the iPhone and iPad. But by all accounts, the A5 is a dual-core version of the 1GHz A4 chip that powers the iPhone 4 and the original iPad. The iPad 2 also has 512MB of RAM (twice that of the original) and a 200MHz bus (again twice that of the first).

The A5 is a dual-core processor, and Apple claims the iPad 2 can run up to twice as fast as the first one. As with any dual-core processor, the key to “up to double” is that the software must be optimized to take advantage of multiple processor cores. Apple also says that the iPad 2’s graphics are up to nine times faster than the original’s.

Whatever the reason, the iPad 2 is indeed faster than its predecessor. I could tell from the moment I started running apps I knew well from my original iPad. Everything felt smoother; items loaded faster.

When I did more-formal testing (see “iOS Speed Tests”), I found that some of the improvements can be credited to iOS 4.3, which ships with the iPad 2 and includes a rebuilt JavaScript engine. When I installed it on an original iPad, that device’s performance improved as well. But even when both models were running iOS 4.3, the iPad 2 was 1.6 times as fast as the original in running the SunSpider JavaScript test, and 1.9 times as fast as an iPhone 4 running iOS 4.3.

Despite the boost in performance, Apple claims that the iPad 2 has the same ten-hour battery life as the original model. In nearly a week of use, I found

no reason to dispute that claim. The iPad’s all-day battery life—one of its killer features—remains intact.

CAMERAS AND FACETIME

The original iPad debuted just before Apple added a front-facing camera to the iPhone. The company subsequently added front- and rear-facing cameras to the iPod touch. Now, with the iPad 2, all of Apple’s mobile iOS devices have two cameras.

The cameras in the iPad 2 are essentially the same as those in the fourth-generation iPod touch: It’s nice that they’re there, but their quality isn’t particularly impressive. The front-facing camera is the same one used in the iPhone 4 and the iPod touch, offering only VGA resolution (640 by 480 pixels).

The main purpose for that camera is FaceTime video-chatting. But once you connect with a fellow FaceTime user, the video doesn’t look great, particularly in low-light situations; the iPad 2’s large screen makes the poor image quality painfully obvious. Whether the camera, the bandwidth demands of video-chatting, or both are to blame is debatable. The video is good enough, but not great.

The rear camera on the iPad 2 appears identical to the one found on the iPod touch. (It’s just beneath the sleep button on the back—a challenge for iPad case-makers.) Apple touts this camera as being meant for video, and there’s a reason: As a still camera it’s about seven-tenths of a megapixel, again with poor performance in low-light conditions. But it’s capable of shooting 720p HD video—and, in well-lit environments, the quality is decent.

3G FOR THE iPad 2

TABLET GETS FASTER
DATA CONNECTION

BY JASON SNELL

If you want an iPad 2 that will connect via 3G, you can choose between a model that works with AT&T’s (generally faster) network and a model that works on Verizon’s (generally more reliable) one. But you need to make that decision up front: The Verizon iPad 2 won’t work on AT&T’s network (and vice versa).

Like the iPhone 4, the iPad 2 supports AT&T’s HSPA/HSDPA system, which will result in faster 3G data transfer in areas where that protocol is available. I managed a 2.2-mbps upload rate and a 1.1-mbps download rate from my house—comparable to what I got from the iPhone 4. (Apple didn’t provide us with a Verizon-compatible iPad 2, but its transfer rates will likely be similar to those of the Verizon-compatible iPhone 4—generally slower than AT&T’s.)

The two companies offer different, but competitive, data plans. If you don’t use much data, AT&T’s \$15-a-month plan for 250MB of data is a good deal. If you use more than 3GB per month, Verizon has the advantage. In between, it’s a toss-up. If you travel overseas, the AT&T iPad uses the GSM standard that’s widely used internationally; because the iPad 2 is unlocked, you can buy a foreign micro-SIM card and avoid AT&T’s expensive roaming charges.

You may not need an iPad 2 with 3G at all. Many smartphones—including the iPhone 4—can create Wi-Fi-based hotspots, which let them share their Internet connections with other devices. Verizon and AT&T charge \$20 a month for the feature, which comes with 2GB of data. That’s a pretty good deal when compared to the iPad 3G plans (other than AT&T’s ultracheap 250MB plan).

iOS SPEED TESTS

	SUNSPIDER	STARTUP	NYTIMES.COM
iPad 2 3G	2.1	26	8
<i>iPad 1 3G</i>	3.3	34	16
<i>iPad 1 Wi-Fi (iOS 4.2.1)</i>	8.1	25	14
<i>iPhone 4</i>	4	46	16
<i>iPhone 4 (iOS 4.2.1)</i>	10.1	36	16

Best results in **bold**. Reference systems are in *italics*. All devices were tested with iOS 4.3 except where otherwise noted. All results are in seconds. SunSpider is a WebKit JavaScript performance test, with results in seconds. The Web page test measured the number of seconds to load www.nytimes.com in its entirety. Don’t be surprised by the faster startup time of the iPad 1 running iOS 4.2; iOS devices without cellular radios have much shorter startup times than those with cellular radios, for whatever reason.

A VIDEO BREAKTHROUGH

One of the most pleasantly surprising features of the iPad 2 is its improved support for HDTVs and HD video. Credit goes to a combination of iPad 2 hardware upgrades, a new adapter from Apple, and updates to the iOS.

The new Apple Digital AV Adapter lets the iPad send high-definition video (at resolutions up to 1080p), as well as Dolby Digital surround sound, over a standard HDMI cable to your HDTV. I played several HD video files from the iPad 2 on several different TVs, and the

video quality was excellent. (For more on that, see "Hook It Up," page 36.)

Another nice addition (especially for anyone who has ever wanted to show their iPad's screen to a crowd) is video mirroring. When connected to the HDMI adapter, the iPad 2 will display the contents of its screen on an external monitor. In mirroring mode, the iPad's interface is crystal clear.

**THE SOFTWARE STORY**

The iPad 2 arrives with a new version of the operating system that powers the iPhone, iPad, and iPod touch. This version, iOS 4.3, is hardly earth-shattering, but it does offer a few nice new features. (For more about this, see "Hands-On: iOS 4.3" on page 38.)

Along with the new version of the operating system, Apple is introducing two apps as a part of the iPad 2 launch. One, iMovie, is an update to the existing version of iMovie that runs on the iPhone



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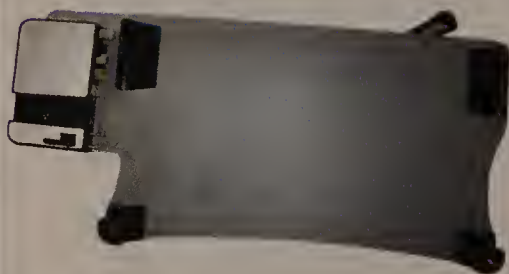


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A SMARTER iPAD CASE

APPLE'S SMART COVER
RAISES THE BAR

BY JASON SNELL

REVIEW

The original iPad really required a case. But all too often, third-party iPad cases hid the iPad's beauty and added thickness and weight.

Clearly Apple didn't want the iPad 2 to suffer the same fate. The company not only introduced a new case—the iPad Smart Cover—but it also built support for that case into the iPad 2.

The Smart Cover—which really does just cover the iPad's front—is a rectangle the exact size and shape of the iPad's screen.

The side that faces inward is covered with soft microfiber cloth; the outside is either leather (\$69) or polyurethane (\$39), each available in five colors.

On its left edge the Smart Cover has a thin, metal anchor that adheres to magnets built into the left side of the iPad 2. That anchor is flanked by two hinges that allow the cover itself to fold back. It attaches easily, once you get the hang of it.

When placed over the iPad 2's screen, the Smart Cover closes with a pleasing snap and stays closed, thanks to magnets embedded in the right side of the iPad and the cover.

The iPad 2 has a sensor that knows when that magnet is in place—so as soon as you close the Smart Cover over the iPad 2, the iPad locks itself. The iPad can also sense when you open the cover: Pull the right-hand flap away from the iPad, even slightly, and the iPad automatically wakes itself up. (You can turn this feature off.)

The Smart Cover is divided into four foldable segments, which enable you to use it in a variety of configurations. Roll it up into a little triangle, and it can act as a



gently inclined typing stand or an upright stand for watching video.

The Smart Cover is a nice companion to the iPad 2. With it, Apple has set a high bar for third-party accessories.

★★★★; \$39 to \$69; Apple, www.apple.com; full review: macworld.com/7055



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HOOK IT UP

DIGITAL AV
CONNECTOR
JOINS IPAD TO
HDTV

BY JASON SNELL

REVIEW

With Apple's \$39 Digital AV Adapter, HD-capable iOS devices can finally output HD video.

The small white adapter has a male 30-pin dock cable on one end and an HDMI port and dock connector port on the other. Plug one end of an HDMI cable into the adapter and the other into your HDTV. When you press play on your iPad's Videos app, you can watch HD video complete with Dolby Digital 5.1-channel surround sound.

There are some caveats, however. Though the adapter supports 1080p-resolution output with the iPad 2 (720p for the original iPad, iPhone 4, and 4G iPod touch), the iPad's maximum video resolution is still 1280 by 720 (720p) at 30 frames per second; movie playback is limited to 720p.

That said, I played several HD video files on several different HDTVs from the iPad 2 connected to an AV Adapter, and the video quality was excellent. Same with the iPhone 4 and the original iPad: My 720p test video (2009's *Star Trek* movie) looked great. The inability to output HD video has been a frequent criticism of the iOS since the release of the original iPad. Now it's here, and it looks (and sounds) great.

★★★★½; \$39; Apple, www.apple.com; full review, macworld.com/7056



4 and iPod touch; the other, GarageBand, is new to the iPad. Both are excellent. For more on them, see "GarageBand for the iPad" on page 38; and "First Look: iMovie on the iPad" on page 42.

EIGHTEEN VARIATIONS

The original iPad came in six different variations—Wi-Fi-only and Wi-Fi/3G versions, each available with 16GB, 32GB, or 64GB of storage. Apple apparently decided that more is better. As a result, there are 18 different versions of the iPad 2. It's a little crazy.

The storage specs remain the same: Every model is available in 16GB, 32GB, or 64GB capacities. There are the two colors: traditional black and now white. And there are the three wireless variations: Wi-Fi only, and a Wi-Fi/3G model from each carrier—AT&T and Verizon.

As noted, the iPad 2 costs the same as the original: The Wi-Fi-only editions cost \$499 (16GB), \$599 (32GB), and \$699 (64GB). Both sets of Wi-Fi/3G models cost \$130 more than their Wi-Fi-only counterparts. There's no price difference between the white and black models.

MACWORLD'S BUYING ADVICE

Let's say you bought one of those 15 million iPads last year. Should you dump your old one and get a new one?

Though the iPad 2 is an improvement on the original in many ways, it's still an evolution of the product, not a brand-new one. If you're happy with your current iPad, there's no reason to dump it just because there's a shinier, newer version. (This is not to say that millions of people won't do just that. I mean: *shiny!*) If you've invested in iPad accessories such as a dock or a case, keep in mind that you probably won't be able to use them with the new iPad.

If someone in your family has been clamoring for an iPad, now might be the time to buy an iPad 2 and hand down your old model.

If you've become a major user of FaceTime or other video-chat apps on your iPhone or iPod touch, upgrading to

an iPad 2 makes more sense, thanks to the integrated cameras. Anyone who demonstrates iPad apps—in seminars, classrooms, or boardrooms—or gives Keynote presentations will want an iPad 2 just for the video-mirroring.

And what about those of you who live someplace where you get great Verizon reception and you're stuck with an AT&T iPad? Trading up to the Verizon model is worth considering—but you might want to also consider adding a tethering plan to a Verizon smartphone and deactivating your existing iPad's monthly service.

If you don't own an iPad because you never buy first-generation hardware products, it's time to celebrate: You can finally slake your thirst. By waiting, you'll have ended up with a faster, lighter product at the same great price and battery life—and with the video cameras and video-mirroring, to boot.

For Apple's competitors in the tablet market, the iPad 2 is a bucket of water to the face. It addresses many of the iPad's deficiencies, dramatically improves its speed, and doesn't cede any ground on price, features, or battery life. The iPad 2 raises the bar Apple set a year ago—and the rest of the industry will have to scramble again to catch up.

For everyone else, the iPad 2 is a triumph, an iPad that's even *more* iPad than the original. And the original one was really good—a bolt from the blue, a device that defined an entire category, and a tough act to follow. The iPad 2 follows it with aplomb.

Jason Snell is Macworld's editorial director.





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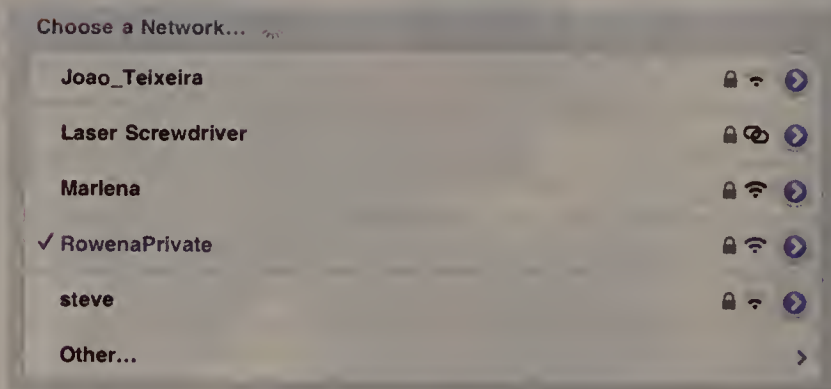
ios 4.3

PERSONAL HOTSPOT, HOME SHARING, AND MORE
BY DAN MOREN

The new iOS 4.3 brings a couple of significant enhancements—Personal Hotspot and Home Sharing—as well as some smaller niceties. But, as with iOS 4.0, those improvements will be available only with certain iOS hardware: In this case, you'll need an iPhone 4 (GSM version only; sorry, Verizon iPhone owners), an iPhone 3GS, an original iPad, an iPad 2, or a third- or fourth-generation iPod touch to take advantage of the new features.

PERSONAL HOTSPOT

Personal Hotspot lets you share your iPhone's 3G data connection with other devices via Wi-Fi, USB, or Bluetooth. Apple introduced the Personal Hotspot feature when it announced the Verizon



Find a Hotspot

To make it easier to find and connect to Personal Hotspot networks, iOS 4.3 replaces the AirPort symbol with a chain-link icon.

iPhone 4; now that feature is available on AT&T's GSM-based iPhones, too.

For iPhone 4 users, Personal Hotspot replaces—and is more attractive than—the limited tethering functionality that debuted in iOS 3.0. You must switch to the carrier's 2GB Data Pro plan, but AT&T adds 2GB of data exclusively for tethering. If you go over that, you can

dip into your smartphone's data plan before incurring overage charges.

The Personal Hotspot is simple to set up: You enable the hotspot feature under Settings ► General ► Network. A new Personal Hotspot submenu appears in the top level of Settings; there you can turn the feature on or off and set a password. Clients can connect via Wi-Fi or Bluetooth,

GARAGEBAND ON THE iPad

APPLE'S FLEXIBLE, AFFORDABLE iPad MUSIC APP DESERVES A GRAMMY

BY CHRISTOPHER BREEN

REVIEW

GarageBand on the iPad is a tool for making music that anyone—from pros to tin-eared newbies—can use. Its "smart" instruments allow you to play ear-pleasing notes, chords, and beats on virtual keyboards, guitars, basses, and drums, without a lick of musical



Guitar Amp

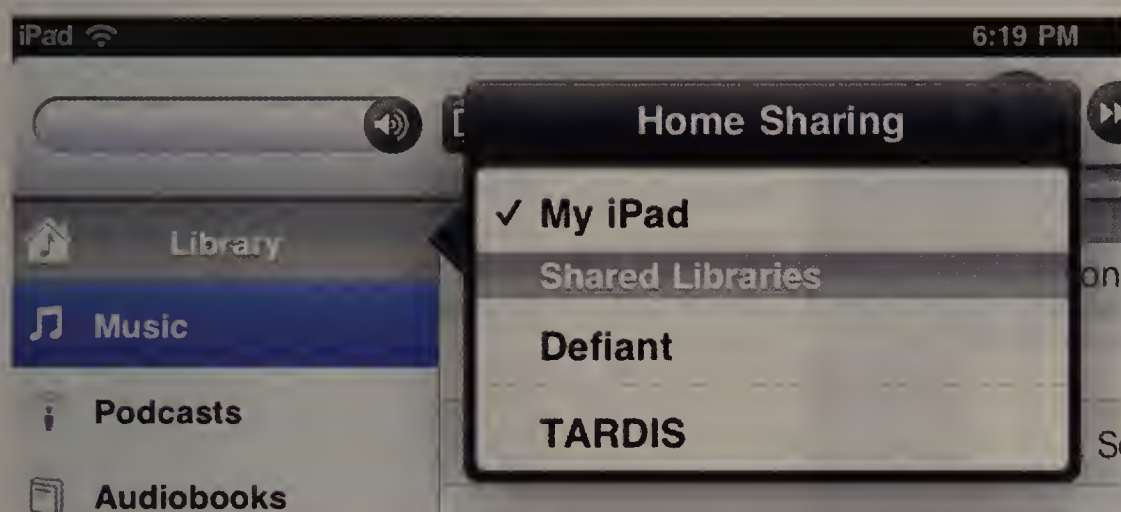
Plug your guitar into the iPad via an adapter and then select an amp; when the iPad records you, you'll sound like you're plugged into the real thing.

training. But this app is also an eight-track recorder that can capture real instruments (connected with a compatible audio interface) and sounds recorded by mic.

After spending many hours with the GarageBand app, a first-generation iPad, and a few music gadgets, I'm a believer.

PLAYING INSTRUMENTS

When you first launch GarageBand on the iPad you see an Instruments screen, where you choose from a variety of tools. Some of those tools are instruments (Keyboard or Drums), others are "smart" instruments (Smart Drums, Smart Bass, and so on). You



Home Sharing To access shared iTunes libraries on the iPad, you tap the Library header at the top left of the iPod app.

or you can plug your iPhone into your Mac via USB. (Note that iPhone 3GS users can share network connections only via Bluetooth and USB, not by Wi-Fi.)

In my quick testing (with a MacBook hooked up to an iPhone 4), USB appeared to provide the best download and upload speeds. Bluetooth was by far the worst—no surprise, given that Bluetooth's transfer speed is in most cases slower than the phone's 3G connection.

Is Personal Hotspot worth the cost? Giving up the unlimited data plan for the required 2GB Data Pro plan was a big move for me. But (as I discovered when I examined my AT&T bills), I'd rarely used more than 700MB a month on my iPhone's data plan in the past year and a half. In the year I've had my iPad, I used about 2GB of bandwidth on its 3G connection. Between the \$5 per month I'd save by switching to the 2GB data

plan, and the \$30 per month I'd save by also dropping my iPad's unlimited 3G plan, I'd come out ahead by \$15 every month. Your mileage may vary, of course, but do the math. (For more about this feature, see "Using the iPhone's Personal Hotspot," *iOS Central*, on page 22.)

HOME SHARING

Introduced in iTunes 9, Home Sharing allows you to (among other things) play media stored on one computer on your local network from a different computer. In iOS 4.3, that feature gets extended to iOS devices as well. Once you've set up Home Sharing on your iPhone, iPad, or iPod touch, you can play media stored on Home Sharing-enabled computers on your iOS device, and you can play the stuff stored on your iOS device from Macs.

Setup is easy: You just enter your Apple ID in Settings ► iPod. But accessing shared libraries isn't always so simple.

On the iPhone, you tap the More button in the iPod app's toolbar, then select the new Shared option. You'll see all the shared iTunes libraries on your

can also choose from a Guitar Amp, an Audio Recorder, and a Sampler.

Select an instrument and you're taken to its screen. You play the Keyboard and Drums instruments much as you do the real things. To play the Keyboard, for example, you just tap on the keys; the harder you tap, the louder the notes. You can also map the keyboard to specific scales—Major, Minor, and many more. You can choose from a variety of keyboard sounds—acoustic and electric pianos, organs, and more.

The smart instruments make input even easier. Choose the Smart Guitar, for example, and you see a guitar fretboard overlaid with chords related to your chosen key. Strum the virtual strings, and the chord plays. Tap the chord symbol at the top to play chords quickly. Click the Autoplay knob, and you can choose from a variety of strumming patterns; tap with two fingers and the pattern changes.

MAKING TRACKS

You record these instruments by tapping a standard red-dot Record button. Once



Keyboard Instrument The interface mimics whatever keyboard you choose.

you've done so, a Tracks button appears; tap that to go to the Tracks screen, where you edit your tracks. Double-tap on a track to Cut, Copy, Delete, Loop, and Split. Tap the My Songs button, and you go to the My Songs screen where you can access saved projects.

I could go on and on. I haven't even touched on the Guitar Amp, Audio Recorder, or Sampler instruments. But I think you can begin to get the idea: This is an extraordinarily versatile tool.

MACWORLD'S BUYING ADVICE

If you needed proof that the iPad is more than a tool for consumption, GarageBand is it. This amazing tool—complete with eight-track recording, an easy-does-it interface, and customizable and easily played instruments—may be the most inspiring musical app I've ever used. And at \$5, it's an astonishing bargain. It's a must-have, whether you're a musician or not.

GARAGEBAND FOR iPad



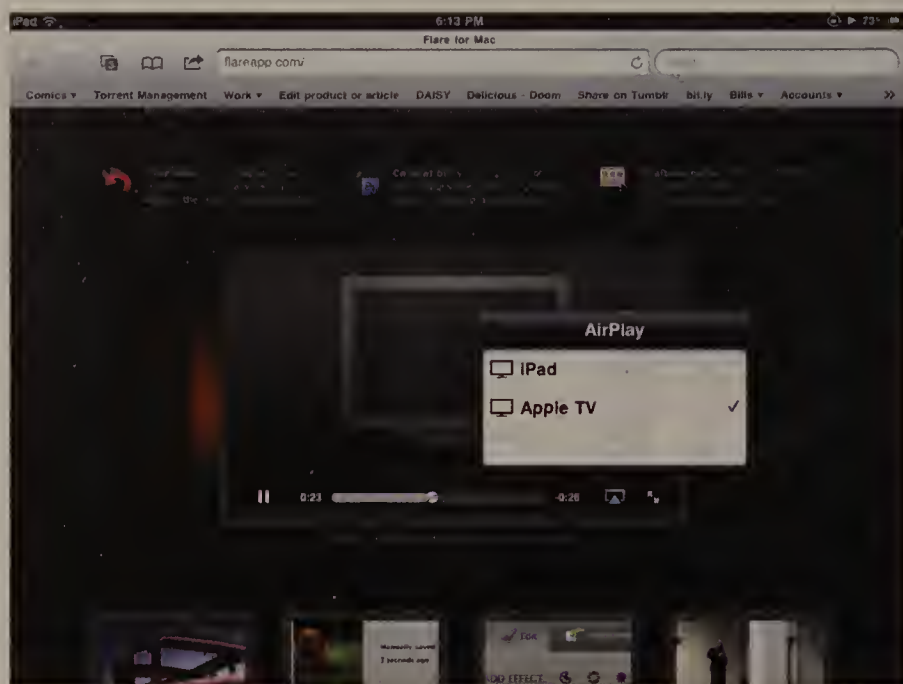
PROS: Brilliant "smart" instruments; easy to use; guitar amplifier effects; high-quality sound samples.

CONS: Clunky project transfer to Mac.

PRICE: \$5

COMPANY: Apple, www.apple.com

FULL REVIEW: macworld.com/7054



AirPlay

Also new in iOS 4.3 is the ability to send Web video from your iOS device to your Apple TV or AirPort Express.

one device, these different interfaces can be confusing.

Streaming performance is good: Music and short videos start playing almost immediately. Longer videos (or HD ones) can take a little time to buffer before they start playing back. Streamed music sounds nearly indistinguishable from that on the local device. Video is clear and watchable, and playback is smooth.

AIRPLAY

Home Sharing does have one big drawback: You still can't stream content from an iOS device to another one or to a Mac. That said, if you have an Apple TV or AirPort Express, you do have another option: AirPlay.

AirPlay (which debuted in iOS 4.2 and iTunes 10) replaces the old AirTunes feature that let you stream music from your iTunes library on your Mac or PC to Apple TVs and AirPort Express devices.

network (as well as your iPhone itself). Tap the shared library, and all of the media you see in the iPod app refers to the shared library; a title bar at the top displays the name of the computer you're connected to. On the iPad,

though, you tap the Library header in the top left of the iPod app to access shared libraries. In the iPad's Videos app, a new Shared toolbar option that lets you browse shared libraries on your local network appears. If you have more than

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Bluetooth

SpeedTest The speed of your tethering connection depends on the method: USB is fastest, followed by Wi-Fi, then Bluetooth.

AirPlay extends that by letting you stream audio to those aforementioned devices directly from your iPhone, iPad, or iPod touch; in some cases you can stream video too.

In iOS 4.3, AirPlay also lets you stream video from compatible Websites, third-party applications, and the Photos app. Unfortunately, this doesn't always work right out of the box. Third-party apps need to add support for AirPlay video; expect a slew of updates over the next few months. And Web video needs to be in a format that iOS devices can play (think H.264-encoded MPEG-4 videos). Video providers, too, will have to explicitly define their videos as AirPlay-compatible.

I ran into a few glitches and inconsistencies while trying out AirPlay support. For example, while you can use AirPlay to play videos from the Photos app, you can't do so if you access your photos and videos via the Camera app. Also, though AirPlay worked fine from the Air Video

app on my iPhone 4, it didn't work at all on my iPad.

iOS 4.3 contains some other nice tweaks as well. If you have a Ping account, it's now available in music-player apps as well as from the iTunes app. Also, you can now choose how the switch next to the iPad's volume control works: You can configure it as a button to lock the iPad's screen orientation or as a mute button. Safari performance is improved, too, thanks to a new JavaScript engine. Also, parents get more fine-grained controls over what their kids can and can't do on an iOS device. And Slideshow transitions, text messaging, and accessibility have all been enhanced.

THE BOTTOM LINE

All told, iOS 4.3 is a solid update, far more than you might expect from an iterative release. While it won't fulfill every wish-list item, it undoubtedly makes iOS devices more capable.



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FIRST LOOK: iMOVIE ON THE iPad

REVAMPED VIDEO APP
TURNS TABLET INTO
POWERFUL HANDS-ON
EDITING TOOL

BY SERENITY CALDWELL

While iMovie on the iPhone provided some basic tools for editing and sharing video, it lacked many key features: You couldn't split a clip in two, for example, and the iPhone's screen real estate made it nearly impossible to accurately cut and put together any project over a certain length.

With the updated iOS version of iMovie, however, the app takes a huge step forward. It has been redesigned, its functionality has increased, and it works on the new iPad 2. While it still has a long way to go before it achieves feature parity with the desktop version, it's now a legitimate tool for editing video on the go.

EDITING ON AN iPad

While the iMovie app has undergone numerous changes in this update, the most prominent is the addition of support for the iPad. (Unfortunately, the app works only on the iPad 2.) The extra screen space that the tablet provides completely transforms the mobile-editing experience, changing it from cramped to comfortable.

The app's new multitouch gestures give you a variety of ways to work with clips and the timeline. With your fingers on the touchscreen, you can zoom in or out, or jump through the timeline; move, split, skim, and rotate clips; and open the Precision Editor for more specific tweaks.

Splitting a video is as simple as positioning the playhead where you'd like to cut, tapping the clip in question to highlight it, and swiping down on the playhead. This gesture can be a bit persnickety, though; if you go too fast or swipe elsewhere, you'll deselect the clip.

Furthermore, the Precision Editor (available only on the iPad) transforms



iMovie from a fun toy to a powerful tool. Not happy with a trim you made when you first moved your clip from the viewer to the timeline? In the Precision Editor, you can finely adjust these trims down to individual frames, with a drag of your finger. It allows for incredibly fine cuts between clips.

Sound editing, too, has been overhauled. You can now layer up to three tracks of simultaneous audio and an optional background track on top of your video; previously, you had only one additional audio track for music. Audio clips can be dragged and dropped throughout the timeline at will.

In addition to everything else Apple has packed into the mobile version of iMovie, titles can now be overlaid on still images, not just on video. Double-tap on an image or video to bring up its clip settings, and tap Title Style to enter the title viewer. You're given the option of having no title, or an Opening, Middle, or Ending title. If you choose Opening, Middle, or Ending, you'll be prompted for some title text; that prompt is surrounded by the theme's title style. Double-tap the default text to bring up the keyboard to change it.

MOVING MOVIES

Finally, if you've started a project on your iPhone, iMovie now enables you to transfer it to another iPhone 4, a fourth-generation iPod touch, or an iPad 2. To export a project, tap the Share button in Marquee view with the proper project selected. The next time you connect your

device to iTunes, a compressed file containing your project—along with any associated audio or video files—will be available for you to download.

Unfortunately, you can't transfer iOS iMovie projects to your Mac; they aren't compatible with iMovie '11. Furthermore, the workflow for this process is more complicated than it needs to be. (Of course, you could say that about iOS file sharing in general.) Other unfortunate features: You can't specify which track you'd like to drop your audio into—annoying for people who like to keep their sound effects separate from their music clips. And the app lacks iMovie '11's audio prowess. For example, while you can view audio waveforms on the iPad, there's no way to individually adjust or split audio clips; you're stuck with a master volume control for each clip and an on/off button.

Still, after spending a few hours with the app, I'm incredibly pleased with it. While desktop applications have tried for years to imitate the experience of flat-bed editing, the iOS touchscreen experience is the first to feel a bit like the real thing. There's something to be said for working with your hands when it comes to video editing—physically swiping down to cut a clip instead of pressing a key.

I can't wait to see where Apple intends to take this app in the future. For now, though, the iOS version of iMovie is fast, reliable, and incredibly easy to learn. For me, it's a no-brainer purchase.

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MAC APP STORE FAVORITES

OF THE 1000+ APPS IN THE APP STORE, HERE ARE THE 32 WE LIKE BEST

Although the Mac App Store has made it easier than ever to find new apps for your Mac, it can pose a problem. At last count, there were more than 1000 apps in the store. Some are worth the download time and the price; many others aren't. The store has ways of helping you find the good stuff—its Top Apps charts and user ratings. But we'd like to give you another one.

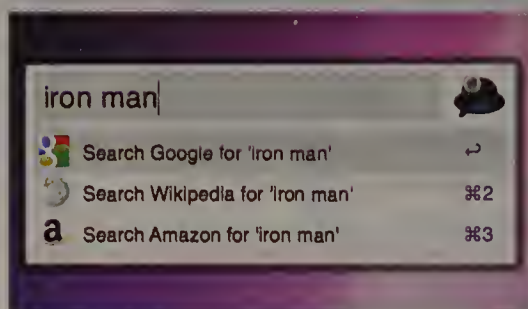
We looked through some of the most popular Mac App Store categories (Productivity, Utilities, and Music, among others) to see which apps we'd recommend. We looked only at the ones that cost \$35 or less—the same limit we apply in our monthly *Mac Gems* column. In the end, we came

up with a list of 32 apps that we think are worth your time and money. Some are already well-known. (Any that were at the top of the App Store sales charts when we compiled our list are marked Popular.) Others deserve wider attention. We bet you'll find at least one or two that you don't already have but should.

Note: In the reviews that follow, we've specified the version of the app that we actually reviewed. In many cases, the version in the App Store is newer. But we checked: If the product in the App Store hadn't substantially changed since we reviewed it, we ran the original review; if it had, we did a new one. Note also: The prices we provide are those listed in the Mac App Store; they are subject to change.

ILLUSTRATION BY JOE ZEFF DESIGN

PRODUCTIVITY



ALFRED 0.8

Launchers range from basic (Spotlight) to powerful and complex (apps like Butler, Launchbar, and Quicksilver). If you want one that can do more than Spotlight, but isn't as complex as those others, Alfred could be it. As with those other launchers, you invoke Alfred with a keyboard shortcut, then type a few letters into the resulting text box. Alfred returns a list of apps (or files) whose names match that string. You select the one you want and press Return, and it opens. In addition to applications and files, Alfred can locate and open Mail messages, Address Book contacts, iCal calendar entries, Safari bookmarks, and more; you can also use it to initiate Web searches and some system actions (such as starting the screensaver). Alfred itself is free, but an \$19 Powerpack add-on provides more functionality, including a clipboard manager and an iTunes controller.—**DAN MILLER**

★★★★½; free; Powerpack, \$19; Running with Crayons; macworld.com/6889

ART TEXT 2.2

Art Text lets you quickly switch from boring Helvetica to something interesting, without the tedious editing steps that some other typography apps (including Adobe Illustrator) require. While Art Text would be good for graphics pros who only occasionally need to make custom lettering, it's really for the rest of us who don't need a full-on type program. For example, fonts are organized by categories—including Fun, Modern, and Traditional—so you don't need to know the name of one to find it. Templates work the same way—you can choose a style you like visually. The program comes with plenty of templates, but also has tools for building your own. (And, no, we don't know why Art Text is filed under Productivity instead of Graphics & Design in the App Store—but it is.)—**JOHN BRANDON**

★★★★; \$20; Belight Software; macworld.com/7051

EVERNOTE 1.4.7

Evernote is a catch-all: With it, you can capture all kinds of information—including plain-text notes, Web pages, PDFs, and uploaded audio or video—which you can



POPULAR

DROPCOPY 1.68



DropCopy is a nifty utility that simplifies the sending of files to and from Macs on your local network. When launched, DropCopy displays a small drop zone (on your desktop or floating on top of other windows). When you drag a file or folder onto it, a menu pops up showing the names of other users on your local network who are running the program. Release the file(s) on another user's name and, after the recipient gives approval, the files are copied to their system (in whatever folder the user has designated). You can also copy files to destinations outside your local network (by providing the IP address) and to SFTP servers. It's a lot simpler than standard OS X file sharing.—**KIRK MCELHEARN**

★★★★; up to three computers, free; Pro version that runs on up to ten devices sharing one Apple ID, \$10; unlimited site license, \$25; 10base-t interactive; macworld.com/7017

POPULAR

DESKTOP CURTAIN 2.1



If you want to hide what's on your Mac's screen—say, to give a presentation, to take a screenshot, or just to focus on one app at a time—Desktop Curtain offers a nicely flexible solution. With it, you can specify the backdrop (image or solid color). You can also customize the way it displays (as a normal window, desktop cover, or traditional desktop background) and how it works with Exposé and Spaces. But what really makes Desktop Curtain special is its simplicity: You can hide your desktop instantly via the Dock, the menu bar, or a keyboard shortcut.—**DAN FRANKS**

★★★★½; \$2; Many Tricks; macworld.com/6982

FRESH 1.2.1

It isn't hard to find recently used documents and programs: You'll find lists of them in the Apple menu and the File menus of most apps. But because these menus are tucked away, many Mac users ignore them. Ironic Software's Fresh makes recent items more accessible and lets you do more with them. When you switch to Fresh, two large, horizontal green bars appear on screen. In the bar on top, Fresh shows recently used items. In the bar below, you can permanently park items you use a lot. You can open an item in either bar by double-clicking on it. If you hold the cursor over an item's name, Fresh will display its full path. Drag an item to another folder to move it, or drag it to another volume to copy it; Control-click the item, and you can do even more. —**DAN FRAKES**

★★★★, \$6; Ironic Software; macworld.com/6180

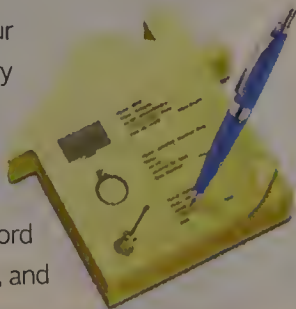


then tag, sort, and search. In addition to the Mac app, there are Web, Windows, iPhone, Palm, Windows Mobile, and BlackBerry clients. Evernote's coolest trick is recognizing the text in images: Take a photo of a document, a prescription label, a book cover, or the like, and once the image is uploaded to Evernote's servers, the text in the image will be fully searchable. —**JEFFERY BATTERSBY**

★★★★, free; Evernote; macworld.com/5214

HOME INVENTORY 2.1

If you care about your stuff, Home Inventory can help you catalog it. It gives you a place to list your possessions and record their makes, models, and serial numbers; you can also attach photographs, date-stamped notes, receipts, files, and warranty information. It comes with six built-in reports, including a coverage analysis (to spot gaps in your insurance policies) and a moving list (to make



sure everything gets from one home to the next). You can also create reports of your own. —**STUART GRIPMAN**

★★★★, \$10; Binary Formations; macworld.com/7018

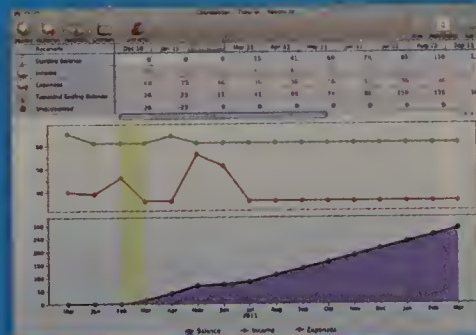
LITTLESNAPPER 1.5.1

LittleSnapper picks up where Mac OS X's built-in screen-capture tools leave off. With it, you can take better screen-shots, archive them, and upload them to the Web. As with other screenshot tools, LittleSnapper can capture the whole screen or just a specific window or area; it can also take timed shots and capture entire Web pages. It includes basic editing tools for cropping, highlighting, blurring, and annotating, as well as tools for tagging, rating, and otherwise classifying screen-shots. —**AAYUSH ARYA**

★★★★, \$25; Realmac Software; macworld.com/5393



FINANCE



CASHCALCULATOR 1.2.2

Cashculator is a clever personal finance application that doesn't work the way most other apps of its ilk do. Rather than focusing on your financial past (what you've spent and earned), Cashculator focuses on the future, by helping you forecast how much money you'll have. Cashculator doesn't have tools for importing your banking statements or pay stubs; nor does it require that you meticulously enter every single financial transaction you make. Instead, you enter your income (such as salary and interest income) and fixed expenses (mortgage, utility payments, and the

like). At the end of the month, or as you go along, you tally up your actual expenses and provide the total balance from your banking statements; Cashculator then updates its summary of your current financial position and its projection of your future cash balances. (In reality, unless your bank neatly categorizes your expenses for you, you may have to do some organizing by hand.) What makes Cashculator truly useful is the way it enables you to create multiple scenarios, so you can see how much money you'll save or spend given new sources of income or different expenses. —**JEFFERY BATTERSBY**

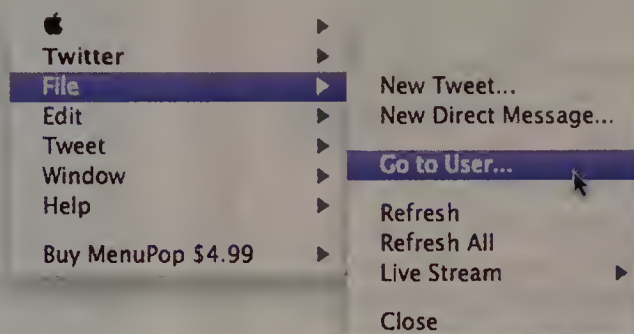
★★★★, \$30; Apparent Software; macworld.com/7019

PRODUCTIVITY

POPULAR

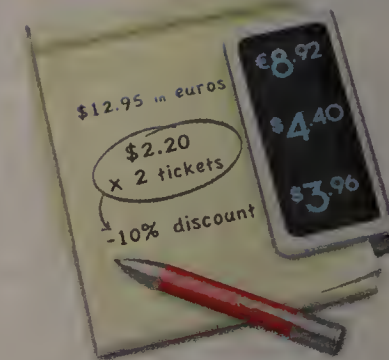
MENUPOP 1.01

If you've got a large display—or multiple displays—the menu bar may be a bit difficult to get to. MenuPop fixes that by putting the menu bar's menus right under your mouse cursor in hierarchical form; you then make the menu bar appear via a keyboard shortcut. You can choose to show keyboard shortcuts for commands, change the menu font size, and display alternate menu commands that normally require a modifier key.—**DAN FRAKES**



★★★★; \$5; Binary Bakery Software; macworld.com/6790

POPULAR



SOULVER 2.0.2

You'd be forgiven for thinking that the only differences among the various calculator programs for Mac OS X are in the mathematical functions they offer and the layout of their buttons. Souolver gives the lie to that assumption. Although it lets you input traditional mathematical equations—**365 x 24 x 60**, say—Souolver also allows you to use something approaching natural language. For example, if you're trying to figure out the price of a \$199 product that's on sale for 15 percent off, you can just type **15% off \$199**; to convert currency, you can type **\$50 in Yen**. To convert time, type **5 minutes 18 seconds in seconds**. A handy Total display shows the sum of all the current window's answers. Souolver also allows you to create temporary variables (**x=73**) and insert data from editable tables of stocks, currencies, and permanent variables. In other words, Souolver is anything *but* just another calculator.—**DAN FRAKES**

★★★★; \$25; Acqualia Software; macworld.com/7022

TYPEIT4ME 5.0

Typelt4Me is one of many utilities, like TextExpander and Typinator, that let you assign shortcut keys to bits of text that you type all the time—your phone number or e-mail address, for example. When you type the shortcut, Typelt4Me inserts the text (which the program refers to as a *clipping*). Clippings can contain plain or rich text, as well as images; and you can configure clippings to include things like dates or the current contents of OS X's Clipboard. Typelt4Me has its own autocorrect tool, which is available in any app you can insert a clipping into; the utility also has something called AutoCue, which lets you insert pauses into snippets so that you can type in variable text. Typelt4Me has been around for a very long time, and with reason: It's a really useful tool that does exactly what it promises to.—**KIRK MCELHEARN**

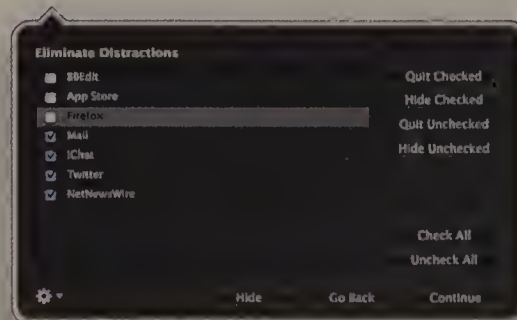
★★★★; \$20; Ettore Software; macworld.com/7020



VITAMIN-R 1.18

Vitamin-R works on the assumption that procrastination results from a combination of vague goals and limited focus. To remedy that, you tell the app what you want to do with a specific slice of time—**Write a review of Vitamin-R**, say. Next, you set the amount of time you want to spend on the task. Then you get to work. As you do so, Vitamin-R's menu item displays a small timer; it warns you (with the sound of a ticking clock or a voice stating how much time you have left) when the end of allotted time is near. When time runs out, you can stop, continue, or rate your focus for the current session. If you find yourself wandering from task to browser to Twitter to iChat and back, Vitamin-R will help stop your wandering.—**JEFFERY BATTERSBY**

★★★★; \$20; Frank Reiff; macworld.com/7021



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UTILITIES

POPULAR

CAFFEINE 1.1.1

You know it's happened to you: You're watching a video or giving a presentation on your Mac, and you haven't touched the keyboard or mouse in a while, and suddenly the screen dims (or your screensaver starts) because your Energy Saver settings kick in. Caffeine solves that problem by temporarily overriding those settings. Click on the coffee-cup icon in the menu bar and your Mac will stay awake; to revert to Energy Saver's normal settings, just click the cup again. If you Control-click the icon, you can activate Caffeine's no-sleep feature for set amounts of time, after which your Mac automatically returns to its normal Energy Saver behavior. This is one of those apps that solves one very specific problem, but it's one that many of us have; Caffeine provides a clean and simple solution.—DAN FRAKES

★★★★; free; Lighthouse Software; macworld.com/6981



FIND ANY FILE 1.5.1

Find Any File will remind veteran Mac users of the search interface in the classic Mac OS. You choose a location to search (specific disks, servers, or folders), then enter your criteria (which can include name, modification or



creation date, size, type, and more). Because Find Any File uses the file system's search features, it can be faster than Spotlight for some searches; it can also find some files that Spotlight can't. The only downside is that Find Any File can't search the *contents* of files, as Spotlight can. Still, if you find Spotlight wanting, Find Any File could be the tool you need.—DAN FRAKES

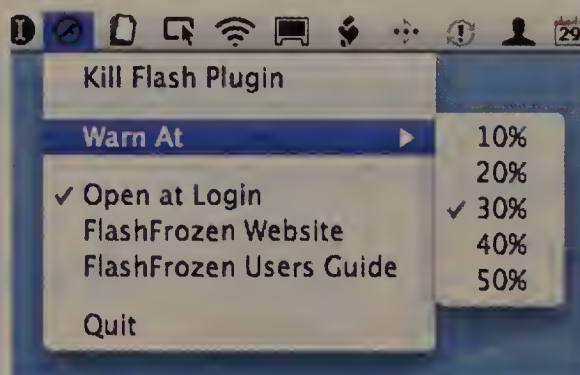
★★★★; \$4; Thomas Tempelmann; macworld.com/6890

POPULAR

FLASHFROZEN

Formerly known as BashFlash, FlashFrozen uses a systemwide menu-bar icon to indicate how much of your CPU Flash is using. If your browser (Safari, Chrome, or Firefox) is bogging down, a glance at the menu bar will tell you whether or not Flash is causing the problem: A dimmed icon means no Flash content is currently loaded; a black one means Flash content is loaded but not using much of your processor; red means Flash is using 30 percent or more of your CPU's capacity. If you know which site is responsible, you can just close the tab or window it's in. If not, you can open the FlashFrozen menu and choose Kill Flash Plugin. That will kill Flash—and *only* Flash—on Web pages that are open in your browser, leaving your other browser windows and tabs intact.—DAN FRAKES

★★★★; free; Tyler Loch; macworld.com/5858



LAYERS 1.0.3

There are plenty of ways to take screenshots—with OS X's own Grab utility, for instance. But most of these types of tools capture your entire screen, a selected portion of your screen, or a single on-screen element (a window, menu, or icon). To get a decent shot, you need to organize windows and clear out stuff you don't want to show. That's why Layers is so amazing. It grabs screens as Adobe Photoshop files, in which every on-screen item resides on its own layer; you can then edit those layers in Photoshop. So you can just capture the screen as it is, and then later move things around as you desire.—DAN FRAKES

★★★★; \$25; Wuonm Web Services; macworld.com/4655

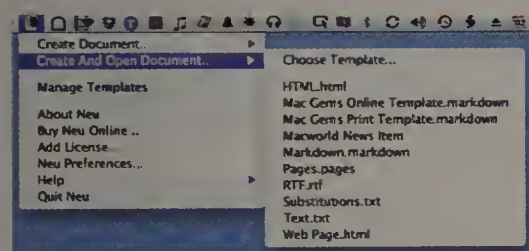


MOVEADDICT 1.51

Windows switchers and longtime Mac users alike agree: It'd be great to be able to cut and paste files. The utility moveAddict provides a way to do just that: Select a file or folder in the Finder and then invoke moveAddict's Cut command (from the systemwide menu, Finder-window toolbar button, or keyboard

shortcut); switch to the desired destination, and paste. The program won't delete the item from its original location until you paste it elsewhere. And if you cut a folder, and the destination already contains one with the same name, moveAddict will ask if you want to replace the existing folder, merge the contents, or do nothing. —**DAN FRAKES**

♦♦♦♦, \$8; Kapeli; macworld.com/6568



NEU 1.0.1

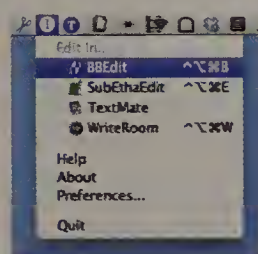
When you right-click inside a folder in Windows, the contextual menu includes an option to create a new document. There have been Mac utilities that did the same thing, but they haven't lasted; Neu picks up that mantle. With Neu running, you can create a new file in five different ways (via the menu bar, the Dock, Services, a contextual menu, or a keyboard shortcut). Neu can then either create a new document

in the active Finder window or create the document and then open it in the appropriate app. It offers a few default file types—PNG image, or a document in plain-text, RTF, HTML, or Pages format—but you can easily customize that list. —**DAN FRAKES**

♦♦♦♦, \$10; Elegant Chaos; macworld.com/6789

QUICK CURSOR 2.0

Between social networking and Web apps, we do a lot of typing in our browsers. If you prefer to do that typing in



your favorite text editor, QuickCursor can make that happen: From your browser, Twitter client, or word processor, click on the QuickCursor menu-bar icon and choose an editor. QuickCursor then switches you to that editor and pastes any text you were working on. When you're done editing, you use the standard Save and Close commands; QuickCursor switches back to the original program and pastes the edited text. —**DAN FRAKES**

♦♦♦♦, \$5; Hog Bay Software; macworld.com/6887

POPULAR

WITCH 3.5.2

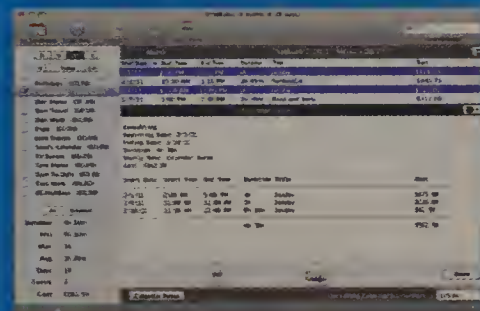
Longtime Macworld favorite Witch

provides an alternative to Mac OS X's built-in Application Switcher (⌘-Tab): Instead of showing you a list of open programs, Witch displays a list of all open windows in all running applications, letting you quickly switch to any of them. The latest update to Witch displays shortcut keys for switching directly to the most-recently used windows, and displays minimized windows differently from regular ones. More importantly, Witch lets you perform a variety of actions—such as Close, Quit, Hide, Minimize, Unminimize, and Reveal In Finder—on the windows and programs it shows; you can also use Quick Look on windows. —**DAN FRAKES**

♦♦♦♦♦, \$14; Many Tricks; macworld.com/6892



BUSINESS



TIMETABLE 2.0.2

While iCal might be fine for keeping track of meetings, events, and appointments, it isn't as helpful when it comes to keeping track of the time you spend on individual tasks and projects.

TimeTable solves that problem by mining your iCal data to tabulate the time you spent on your tasks; this makes it a good tool for consultants and anyone else who needs to track their time.

When you start TimeTable, you select one or more of your iCal calendars, and

TimeTable displays a list of all the current month's events in each one. For every event in the list, TimeTable shows its name, start date, and duration; you can optionally add additional columns such as Start Time and End Time. A search field allows you to filter your results (by client, for example). You can assign a single pay rate to all calendars or a different rate for each; the program then automatically calculates the cost of each event.

After filtering and selecting the calendar data you want, TimeTable lets you export it as a plain-text file, an e-mail message, or a comma-separated-values (CSV) file, ready for importing into a spreadsheet or invoicing program. TimeTable isn't as sophisticated as a program like Billings or iBiz. But if your main goal is to track the amount of time you spend on different activities, it could be all you need. —**TOM NEGRINO**

♦♦♦♦, \$20; Steven Riggs; macworld.com/7023

SOCIAL NETWORKING

POPULAR



KIWI 2.0

All Twitter clients do essentially the same thing: They enable you to compose and read 140-character missives. It's the embellishments that separate one Twitter client from the rest, and Kiwi's embellishments make it worth a look. For starters, it offers plenty of customization options. The app comes with ten themes, and you can download more from Kiwi's Website. It also makes good use of tabs: In a single, tabbed window, you can store multiple accounts, saved searches, and even saved profiles (which show all the tweets from, and replies to, a specific account); and you can tear off those tabs into windows of their own. When you click on an avatar, a profile window flips down with a slick animation, offering details about the user in question. You can also create filters—which Kiwi calls Rules—to highlight, stylize, or hide specific tweets. Kiwi isn't perfect, but it does enough to make it stand out from the crowd.—LEX FRIEDMAN

★★★★: \$1; YourHead Software; macworld.com/7024

POPULAR

SOCIALITE 1.2

Socialite is The One Water Cooler To Rule Them All. It looks much like an e-mail client, but instead of handling your e-mail, it handles your social networks. After you provide your credentials, Socialite shows your accounts in the left sidebar. You can then view activity for each service separately, or together, in a catch-all Unread area. In addition to Twitter, Facebook, and Flickr, Socialite supports Digg, Google Reader, and good ol' fashioned RSS; it also lets you send links to Instapaper for later reading. Unlike some other do-it-all social apps, Socialite supports many service-specific features, such as the abilities to comment on your friends' Facebook posts, retweet messages on Twitter, and mark Flickr photos as favorites.

—DAVID CHARTIER

★★★★: \$10; Apparent Software; macworld.com/6264

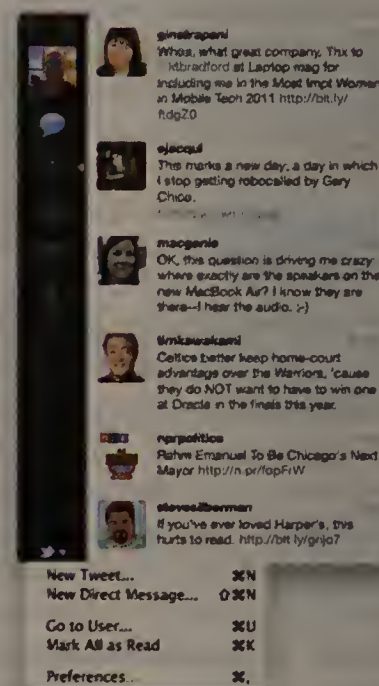


POPULAR

TWITTER 2.0.2

Twitter's official app is an excellent example of the way Mac software is becoming more iOS-like: It has no traditional menu bar; it uses nonstandard widgets for things like Close, Minimize, and Resize; and it relies on unusual side-tab navigation. But despite all that, it works: The Mac app feels a lot like the iOS version—in a good way. It makes navigating through conversation threads easy—subtle animations and hierarchical tabs let you know where you are at all times. It also takes good advantage of swiping gestures (on your laptop's trackpad or a Magic Trackpad): You can use them to navigate almost anywhere within the app. Were Twitter (the app) useful only for navigating (and posting) messages on the Twitter service, that would be enough. But it's also a delight to use.—LEX FRIEDMAN

★★★★: free; Twitter; macworld.com/7025





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MUSIC

POPULAR



COVER-SCOUT 3.1

Any music you buy from the iTunes Store comes with the album art embedded. But tracks that you have ripped yourself are a different story. If you have an iTunes Store account, iTunes can download art for some of the tracks you've ripped—but only if iTunes has the album and if the track tags in your library match those in the store. You don't need to worry, though. CoverScout hunts down artwork when iTunes can't. With this app, you can download and edit album art for tracks in your iTunes library (or in any folder on your hard drive); you can add art to albums that have none or find better art for those that do. (CoverScout searches a number of Amazon Websites around the world, as well as Walmart.com and Google Images.) It also comes with built-in editing tools, so you can scale and crop the art it finds.—KIRK MCELHEARN

★★★★; \$30; equinix;
macworld.com/6991



I LOVE STARS 3.0

As with iTunes controllers, plenty of iTunes utilities make it easy to rate the currently playing song even when you aren't in iTunes. What sets I Love Stars apart is its focus on the little things. For example, the rating scale automatically hides when iTunes isn't playing, freeing up menu-bar space. You can use your mouse's scroll-wheel to set a rating. If an unrated song has played roughly two-thirds of the way through, I Love Stars plays an audible alert and flashes the rating scale to remind you to rate the track. If you are assiduous about rating your music, you'll find that I Love Stars is a superhandy add-on.—DAN FRANKS

★★★★; \$1; Potion Factory;
macworld.com/5622

MUSIC & SPEECH CLEANER 1.0

Music & Speech Cleaner is a powerful, effective, and reasonably priced utility that cleans up podcast files and just about any

other audio clip without a lot of fuss. It's essentially a lightweight, uncomplicated audio-processing tool that doesn't require that you know anything about sound waves or why an MP3 has pops and clicks. Music & Speech Cleaner works with and saves in most popular audio formats (including WAV, AIFF, MP3, M4A, AAC, WMA, MOV, MP4, and AVI); if you drop a movie into the app, you will see only the audio portion, which you can then edit. The interface is intuitive: Buttons for zooming in on clips, splitting tracks, and even recording your own audio are easy to find. To apply an effect, you just click its small button. This app is a good all-purpose audio cleanup tool and is ideal for just about any Mac user.—JOHN BRANDON

★★★★; \$20; iZotope; macworld.com/5977



POPULAR

BOWTIE 1.3.1

Plenty of utilities provide mini-controllers for iTunes. Like those others, Bowtie provides a small window where you can switch, pause, play, or rate tracks; it also lets you control the volume. What distinguishes Bowtie from all the others is its dozens of downloadable themes that let you customize the Bowtie window. Some of the themes incorporate album art, others are all text; some are tiny, others large; some even use animation. You can download and apply all themes from within the app.—KIRK MCELHEARN

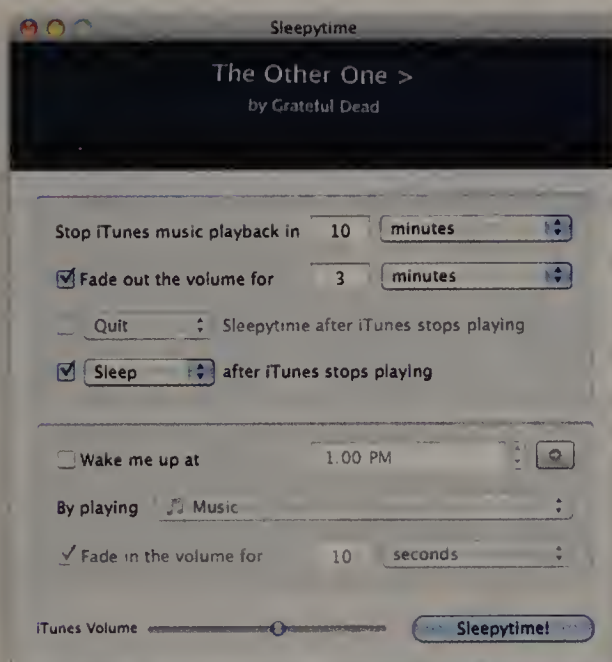
★★★★; free; 13pt Bold; macworld.com/7026



SLEEPYTIME 1.1.2

For people who like to go to sleep or wake up to music, Sleepytime is a great little app. You start playing whatever you want to listen to in iTunes and then launch Sleepytime. You then specify how long iTunes should play and how long until the volume fades out before the music stops. You can also set Sleepytime to quit after it stops the music, and to log out, sleep, shut down, or restart your Mac. You can even use Sleepytime to wake up to your favorite tunes: Set a time to wake up, choose a playlist, and decide whether you want the volume to fade in when it starts playing, so you won't be jolted awake by the sudden sound; unfortunately, Sleepytime can't wake up your Mac if it's in sleep mode. Otherwise, Sleepytime is a nice, simple app that does its one little thing very well.—KIRK MCELHEARN

👤👤👤👤: \$2; Michaël Fortin; macworld.com/7027



TANGERINE 1.3.6

Creating and sequencing playlists according to tempo—for a workout mix, say, or for dancing—can be tricky. That's why Tangerine is so handy. By determining the beats per minute and the beat intensity of the songs in your iTunes library, it can help you create tempo-based playlists. Before it can do that, though, Tangerine has to analyze your songs; depending on your Mac and the size of your library, that analysis could take some time. Once the analysis is

done, the app groups songs by tempo and intensity; you can then drag and drop similar songs onto its bottom pane to create a playlist, which Tangerine sends to iTunes.—KRIS FONG

👤👤👤👤: \$25; Potion Factory; macworld.com/4815



DEVELOPER TOOLS



ROOSWITCH 1.5

Think of rooSwitch as a utility that, instead of doing faster user switching, does fast app switching. Designed primarily for beta users and software developers, rooSwitch lets you switch users for one app at a time. It works with nearly all programs, supports Automator and AppleScript, and lets you view multiple rooSwitch application controls simultaneously.—DEBORAH SHADOVITZ

👤👤👤👤: \$19; Made By Rocket; macworld.com/4785

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WORKING MAC

Tips, Tricks, and Tools to Make You and Your Mac More Productive

Pages Labels Made Easy

Make your own template for any size label by using Apple's page-layout program

BY JEFFERY BATTERSBY

One gripe you'll sometimes hear about Pages '09, Apple's otherwise excellent word processing and page-layout application, is that it provides little in the way of support for printing labels. But while it's true that Pages doesn't ship with any built-in label templates, using the program to create and use standard labels is quite easy.

Step 1. Check for Premade Templates

You might already know that you can download tons of Microsoft Word templates for the most common label types directly from the Avery Label Website (macworld.com/7007). You can then open a Word template in Pages, but you'll often need to adjust the measurements slightly to make the templates work. (If you choose to do this, skip to step 6.)

Avery now offers a limited selection of downloadable templates in Pages format, too. But often you'll find that there are no downloadable templates available for the label that you want to use. That's when you need to create a label from scratch.



Microsoft Word for Windows

1. Select Tools > Letters and Mail Envelopes and Labels or Tools > Envelopes and Labels.

2. On the Labels tab, click the down arrow to select a label product.

3. For Printer Information (selected), select Label. For Label product, select standard.

4. Under Product number, select 5 Tab select Divisor 5 - Tabs or Worksaver. For 8 Tab select Divisor 8 - Tabs or Worksaver.

5. Click New Label. This will add to the existing label settings:

	5 Tab	8 Tab
Label Name:	Big Tabs 5	Big Tabs 8
Top margin:	1.0"	0.5"
Side margin:	2.25"	2.75"
Vertical pitch:	0.5"	0.5"
Horizontal pitch:	2.0"	1.5"
Label height:	0.5"	0.5"
Label width:	2.0"	1.5"
Number across:	2	2
Number down:	18	20
Page size:	Letter	Letter

6. Click OK. Click OK again. Click New Document.

7. The new document contains a table with cells for each label. If the table gridlines are not visible, select Table > Show Gridlines to display them.

8. To center and enter text:
- Press Ctrl A to highlight all the inserts
- Press Ctrl E to set center for all the inserts

9. Type text in first insert. Press Tab key to move to next cell. Type the same text side-by-side to create an

Printing Suggestions

Once you have completed your design, print on a plain sheet of paper. Hold the printed sheet behind the Staples® Brand product to check the alignment of your layout. Due to variations between printers, slight adjustments to the layout may be necessary. If the entire sheet is slightly misaligned and you can change the margin settings in your software application, try adjusting the top and/or left margins slightly. When satisfied with the layout, print onto the Staples® Brand product. Feed the sheet as appropriate for your particular printer.

Print a Half-Sheet - Save the rest for later

NOTES: Only for printers capable of feeding 8.5" x 5.5" paper sizes.

1. Split insert sheet in half - horizontally.

2. Feed into printer on non-perforated side (see arrows on top and bottom of insert sheet).

Need Help?

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weekday business hours at
1-800-425-0049
Or visit us online:

Decoding the Dimensions Look at your labels' package to find the labels' measurements. You'll use this information to create a template from scratch.

Step 2. Get the Measurements

Labels with no templates typically have measurement information that you can use to create the label manually. For the purposes of this exercise, we're going to use the dimensions of the label inserts for the dividers that come with Staples' Big Tabs 8 brand of tabbed folders, but you can substitute whatever numbers you need for the labels you want to use.

Search the package for size information. Typically, you'll see something like what we found on the Big Tabs 8 package (see "Decoding the Dimensions"). If you can't find anything, break out your ruler and measure the sides of the label itself. You'll use that information to create your template.

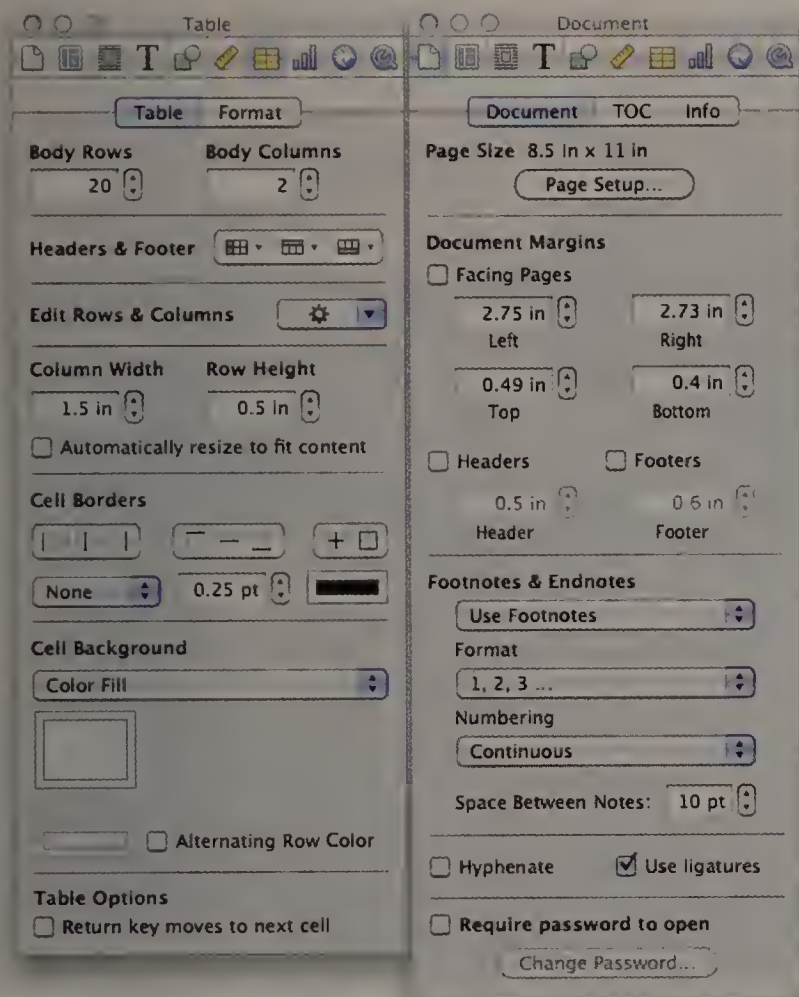
Step 3. Create a New Document

To create your own template, launch Pages and create a new, blank word processing document.

After the blank document appears, open two inspectors by first choosing Show ▶ Inspector and then choosing View ▶ New Inspector. Set one to display document settings and the other to display table settings.

Step 4. Set Up the Margins

Use the document inspector to make changes to the layout of the document according to information from the measurements you found. Make sure you remove the checkmarks from the Headers and Footers checkboxes, as headers and



Inspector Settings When you've made your adjustments, the Table and Document inspectors should look like this.

footers limit the amount of printable space available to you on the page.

Step 5. Create a Table

Next, add a new table to the document by clicking the Table button on the toolbar. (Or, you can add a table by selecting Insert ► Table.) By default, Pages inserts a three-row-by-three-column table, with a single header row. You'll need to change those settings in the Table inspector.

Select the table and then, in the inspector, change the body rows and columns to reflect the labels we're using—20 body rows and 2 body columns. (You're getting the information you need for the table from the Number Across and Number Down fields on the Big Tabs 8 package.)

Next, click on each button in the Headers & Footer section and choose zero. Now, you want to change the row height to 0.5 inch and the column width to 1.5 inches. However, when you try to change the column width, that field will only allow you to change the number to 1.49

inches—a problem we'll fix in step 6.

You don't want each table to automatically resize if you add too much text, so deselect the checkbox that says Automatically Resize To Fit Content. In the Cell Background section, choose None.

Step 6. Make Necessary Tweaks

You'll notice that, even though we've entered the information exactly as it appears in the measurements on the labels' package, our labels don't all fit on a single page.

Here's where the art of making a template begins. To

fix the way the labels fit, you'll need to change the bottom margin to 0.4 inch in the Document inspector (not the Table inspector).

When you're done, print the template, with the table lines still visible, and hold it up to the light behind one of your labels

so that you can compare the lines on your template to the actual lines on the label.

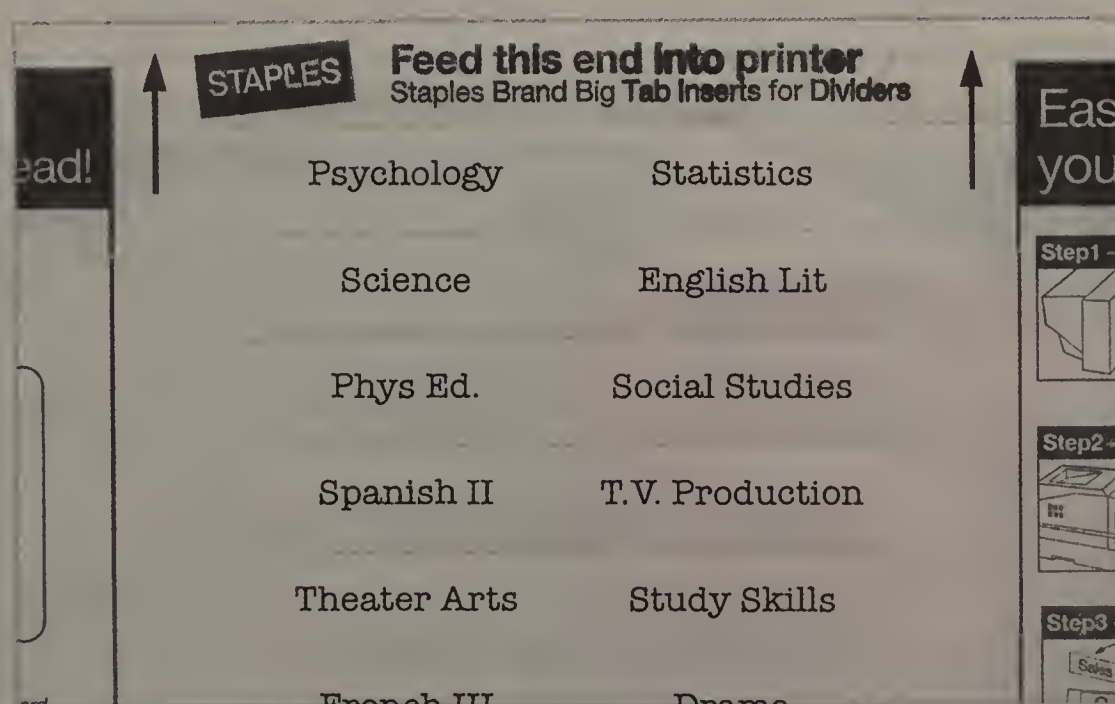
After looking at the label in the light, you're going to have to make some other minor adjustments to the template. In this case, I changed the left margin to 2.75 inches; the right margin to 2.73 inches; the top margin to 0.49 inch; and the bottom margin to 0.4 inch. Once I made these changes, I could change the column width to 1.5 inches (see "Inspector Settings").

Making adjustments is less a matter of science than it is a matter of judgment. I suggest that you make smaller changes—0.1 inch here, 0.05 inch there—and remember that the Edit ► Undo menu is your friend.

Step 7. Clean Up Your Template and Print Out Your Labels

Once you've made the necessary changes to your template, use the Table inspector to remove the cell borders from your table. First, select the table. (One way to do this is to Control-click on the table and choose Select All.) Then select None from the Table inspector's cell borders menu.

When you're satisfied with your work, save the document as a Pages template so that you can use it again in the future (File ► Save As Template). Now you're ready to print out your labels and put them to good use (see "Results").



Results When the labels are finished and printed, this is more or less what you'll get.

Opera 11

Faster than Firefox, this Web browser offers an interesting alternative

BY NATHAN ALDERMAN

REVIEW

Version 11 of Opera Software's proudly independent browser adds more features to help close the performance gap.

Speed Matters

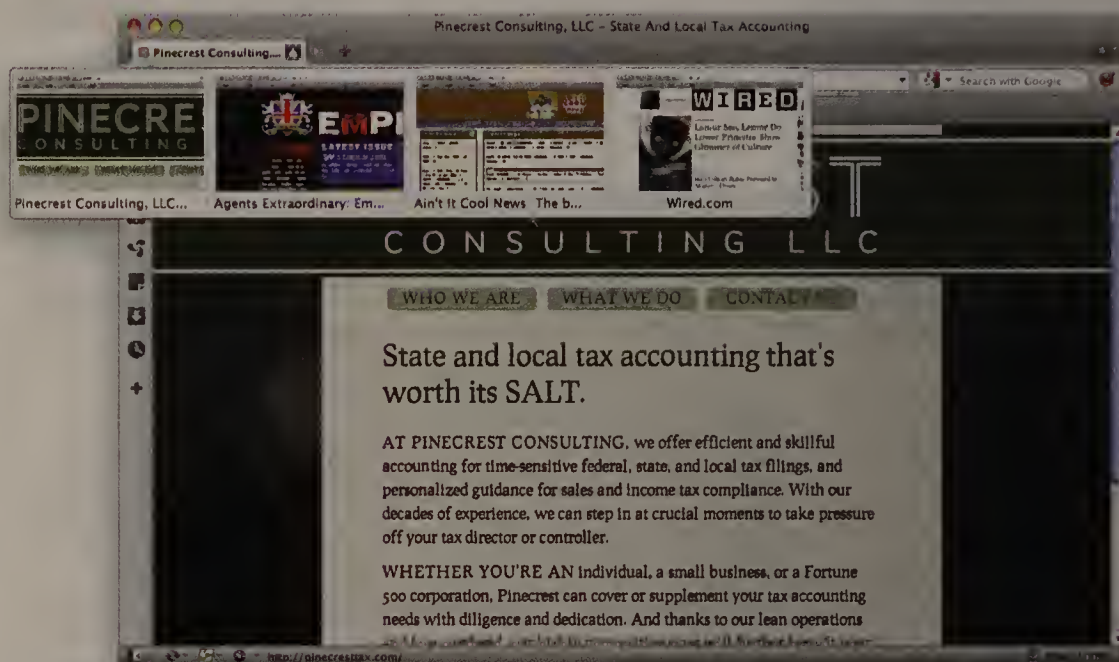
Tested against Apple's Safari 5.03, Google's Chrome 8, and Mozilla Firefox 3.6.13, Opera 11 held its own. In an XHTML rendering test, it scored 1.53 seconds, behind Safari's 0.55 and Chrome's 0.64, but well ahead of Firefox's 9.26. In a CSS rendering test, Opera's 208-millisecond score considerably trailed Safari's 32 and Chrome's 54, but was still ahead of Firefox's 342.

In the SunSpider JavaScript benchmark, Opera's 416.5 milliseconds nipped at the heels of Chrome's 372.4 and Safari's 388.5, and humbled Firefox's poky 1,256.8 milliseconds.

In HTML5test.com's benchmark of compliance with the emerging HTML5 standard, Opera scored a total of 184 out of 300, compared to Chrome's 244, Safari's 215, and Firefox's 143.

Interface Innovations

Stackable tabs are Opera 11's flashiest new feature. Rather than clutter up the top of your browser window with a whole pile of



Tab Talents Opera's stackable tabs can cut the clutter atop your browser window, but the feature works best with only a handful of tabs in each stack.

open tabs, drag one or more atop each other to create a stack. Click the stack to expand; mouse over for visual previews.

A button in the address bar lists a page's security status. You can easily scan the page for malware or phishing, and even report suspicious pages.

Though it retains version 10's esoteric, toy-like Widgets, Opera 11 adds more useful Extensions for blocking ads, translating pages, sending PDF files

straight into Google's PDF viewer, and so on. Note that Opera 11 doesn't work with Netflix's Watch Instantly service.

Macworld's Buying Advice

If you seek a fast, smartly crafted browser to meet nearly all your online needs, Opera may be singing your tune.

★★★★; free; Opera Software, www.opera.com; full review, macworld.com/7029



Retrostriper LTB-1041

There's nothing subtle about Oxio's Retrostriper LTB-1041 Laptop Brief for 15-inch laptops (\$80; www.oxiostyle.com). Most of the bag is the kind of bright orange you might wear to avoid being shot by hunters. Yet somehow, Oxio has managed to make the look work by complementing the bold color with smartly designed accents. Oxio's attention to design detail goes beyond the bag's looks, too. The Retrostriper is also very sturdy, and is able to withstand above-average amounts of wear and tear. Plus it keeps your laptop safe from Mother Nature's wrath with a water-resistant, polyester-and-PVC exterior. Even with the laptop and file sections filled, the middle of the bag has enough open space to hold the regular odds and ends, such as your wallet, keys, power cord, and peanut butter and jelly sandwich. Overall, the Retrostriper is a superbly crafted, hip, and very, very orange briefcase for your MacBook Pro. —HEATHER KELLY



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24 Hours with ePrint

Macworld Lab puts HP's print-by-e-mail service to the test

BY MELISSA RIOFRIO

The new ePrint service from HP sounds great: You can print from anywhere to one of HP's ePrint-enabled printers by sending the job via e-mail. Instead of requiring a printer driver or a direct connection, cloud computing lets you send your job through an HP-managed server to the printer.

HP's promotional text encourages you to use HP ePrint mobile printing to "instantly share memories (send a photo of your child's first steps directly to Grandma's printer two states away) or print important materials without delay (print itineraries, directions, purchase confirmations, and more, right from your mobile device)."

Instantly? Without delay? Dig into HP's ePrint FAQ, and you'll find this disclaimer: "As with any email, there is no guarantee when or if it will be received." To test the service, we spent 24 hours sending ePrint jobs to see which ones would print, which ones wouldn't, and how long the jobs would take.

How We Tested

We set up two ePrint-enabled models in our lab: the HP Envy 100 e-All-in-One (macworld.com/7009) and the HP Photosmart eStation (macworld.com/7010). Each ePrint-enabled model comes with a deliberately long and

complex e-mail address—the better to protect the printer from spammers and other security risks. You can also restrict the models to accept print jobs only from specific senders' e-mail addresses.

Our sending devices included several cell phones—an iPhone, an Android phone, and a BlackBerry, all using the handsets' e-mail clients to send from Gmail, Hotmail, and Yahoo—as well as a couple of traditional desktop computers, one on site and one remote.

Although you can send file attachments as big as 5MB to print on the destination printer, we decided to keep things simple, sending just a brief e-mail message with no attachment at all.

We all took turns sending jobs at set intervals during waking hours—as late as 1 a.m., in the case of editorial assistant Alex Wawro. *Macworld* intern McKinley Noble stayed up to send jobs through the night, while freelance writer Jon L. Jacobi scheduled overnight jobs to send via his Outlook client.

Lost in the Cloud?

To HP's credit, most successful jobs took just one or two minutes to print; the longest took 30 minutes. But not all were successful. Of the 46 ePrint jobs we sent to the HP Photosmart eStation, only 37 printed—about an 80 percent success

rate. On the HP Envy 100, 41 of 51 ePrint jobs printed, for another 80 percent success rate. The biggest failure was one tester's repeated attempts to send ePrint jobs via Hotmail, using BlackBerry's e-mail client; it worked only once out of 12 attempts.

Our Hotmail-via-BlackBerry problems are a known issue: HP's servers mistake the e-mail for spam. HP acknowledges that this sending scenario is common, and notes that it is still finding combinations of the client, device, and printer that don't work correctly.

According to HP's ePrint FAQ, the company has tested with Outlook 2003 and 2007; the major Web-based services, Gmail, Hotmail, and Yahoo Mail; Apple Mail; and the e-mail clients for BlackBerry and Nokia/Symbian. Nevertheless, a footnote cautions that "testing does not guarantee full compatibility."

If you remove the Hotmail-via-BlackBerry issues from our log, ePrint's success rate improves to 93 percent on the HP Envy 100 and 88 percent on the HP Photosmart eStation.

HP is also supposed to send you an acknowledgment e-mail when one of its servers receives your print job. We didn't always receive an acknowledgment, but when we did, it came anywhere from instantly to almost two hours after we had sent the job—sometimes long after the job had printed. HP says that some e-mail services delay the delivery of these items.

As for the sent jobs that never printed, HP representatives say that this is another known issue. The company plans to address the problem in the next update to the ePrint server.

A (Mostly) Reliable Printing Method

Cloud computing is a lot like its namesake: it's way up there somewhere, largely uncontrollable and unpredictable. HP's ePrint operates in that cloud, so adjust your expectations accordingly.

Melissa Riofrío is a senior editor for *PCWorld*. *Macworld* staffers Jim Galbraith, Jon L. Jacobi, McKinley Noble, and Alex Wawro also contributed to this story.



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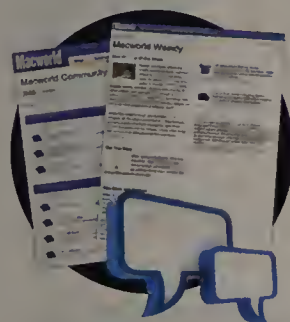
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HARDWARE

**Clearwire
Rover Puck** ▷

Clearwire Communications offers consumers who don't want to commit to (or can't qualify for) a service contract this pay-as-you-go mobile hotspot alternative. The very portable Puck lets you become a walking hotspot, sharing 4G Internet access with up to seven friends. The catch is that you can use it only in Clearwire's WiMax service areas. What's more, the Puck doesn't support 3G; enabling the device to connect to 3G when 4G isn't available would have been a welcome convenience. Still, if you're able to stick to WiMax turf, the Puck is a good and economical option. The pay-per-use option for the Puck costs \$5 for a day, \$20 for a week, or \$50 for a month of 4G service. At 4.25 inches in diameter and about 0.75 inch high, the Puck fits into a backpack or purse. In our tests, the Puck provided access for about four hours straight on battery power alone for two users who were performing ordinary Internet connectivity tasks such as viewing and sending e-mail, loading Web pages, and watching the occasional video (macworld.com/7011).

🔧🔧🔧; \$150 with service plan; Clearwire Communications, www.rover.com



multifunction printer with fax capabilities. Aimed at small or home businesses, the Officejet can produce prints as large as 13 by 19 inches and can copy and scan 8.5-by-14-inch documents from either the flatbed or the 35-sheet automatic document feeder. It's one of the few printers to currently support Apple's AirPrint and HP's ePrint services. If you have an iPad or iPhone on the same Wi-Fi network, you can use AirPrint to print documents and photos from it. HP's ePrint lets you download and use printing apps on your printer, as well as print remotely via the e-mail address that HP assigns your printer. The Officejet 7500A is an average performer, with a text speed of 6 pages per minute and a photo-printing speed of 0.4 ppm. For a business printer, text print quality was fair, with fuzzy edges. Photos had a ruddy cast and colors were a bit oversaturated. Inks are reasonably priced below the average in both the standard and high-yield cartridge sizes. The standard sizes costs 4.8 cents per black-only page and 3.3 cents per color, per page (macworld.com/7012).

🔧🔧🔧; \$225; HP, www.hp.com

**Iomega eGo
BlackBelt
Mac Edition
1TB** ▷

Iomega's eGo BlackBelt is billed as one tough drive—and it appears to be just that. This black, fairly compact drive, which is encased in a removable Power Grip Band, performed well in our series of stress tests: We dropped it from a seven-foot height, kicked it down a flight of stairs, and nonchalantly knocked it off our workbench more than a few times over the course of a week. After all that, the drive still worked just fine. It faltered only when we crushed it. Too much weight (150 pounds or more) can cause the drive to have trouble staying powered up. The BlackBelt sports a USB port and two FireWire 800 ports. (You'll need an



adapter if you're running a Mac with a FireWire 400 port.) It's one of the faster portable hard drives we've tested, posting improved write/read speeds in most of our tests. The fastest of the drive's USB 2.0 test results was its write speed when copying a 2GB folder—it clocked in at 31.3 MBps, a record that the BlackBelt now shares with the Iomega Skin and the Hitachi G-Drive Slim 320GB. The BlackBelt is currently the fastest portable FireWire 800 hard drive we've tested (macworld.com/7013).

🔧🔧🔧; \$190; Iomega, go.iomega.com

**IronKey Personal
S200, 1GB** ▷

The IronKey Personal S200 offers possibly the slickest combination of software- and hardware-based security in the flash-drive market. Though you log on via software, the S200 uses hardware encryption, so there's no software running on your computer that can be hacked to intercept data. The drive, stylishly rendered in brushed silver metal, is rugged and easy to use. The Personal S200 uses a small CD-emulation partition to store and automatically run its control panel, which you use to log on and administer the drive. The control panel is portable, so no installation is required, and it can run on Mac OS X, Windows, and Linux. If you choose, you can enter your password via a randomizable on-screen keyboard to foil keyloggers. The actual data partition remains hidden until you've entered the correct password. The IronKey

**HP Officejet 7500A Wide
Format e-All-in-One Printer** △

The HP Officejet 7500A Wide Format e-All-in-One is a wide-format, inkjet

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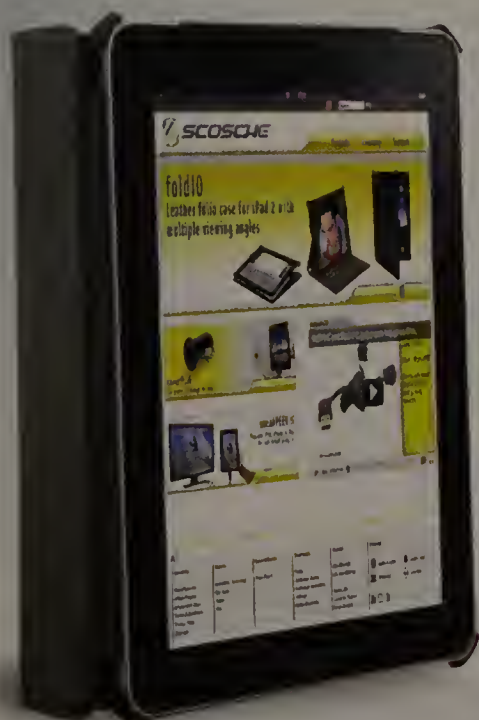
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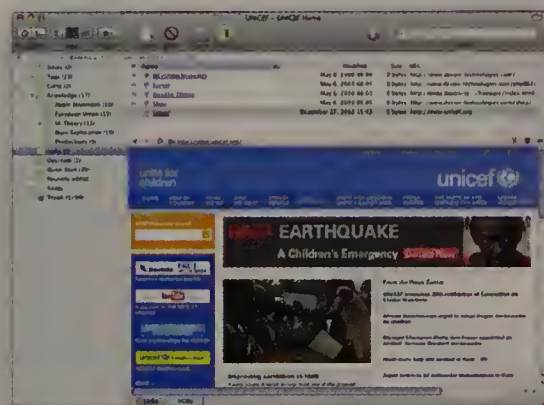


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is a stylish and exceptionally well-conceived flash-drive security product, especially for people who aren't in the market for a drive with biometrics, or one with a keypad. It's available in sizes from 1GB to 16GB (macworld.com/7014).

🔒; \$79; IronKey, www.ironkey.com



SOFTWARE

DevonNote 2.0.6

DevonTechnologies' note-taking and data-organization program is a repository for blocks of text. That text can be plain and unformatted, Rich Text Format (RTF), or a URL. Finding your way around DevonNote should be familiar to anyone who has used the multipane interface pioneered in iTunes. Two of the program's features in particular help with organization. Much like iTunes' smart playlists, DevonNote's smart groups allow you to specify a set of search criteria that is executed each time you open a folder. So rather than having to manually track down and group all the AppleScripts you modified last month, you can have a smart group do it for you. Another standout feature is called See Also & Classify. When you select a single item in the DevonNote library, this dual-paned "drawer" offers up various groups that the selected item may fit into. You'll find the program a good value as long as DevonNote handles the types of information you use. Otherwise, its limitations can be frustrating. For example, DevonNote won't import a folder of PDFs, though it will let you *manually* add each PDF to the library as a URL—and the URLs display just fine. If you need to organize more than text, you'll want to look elsewhere (macworld.com/7015).

🔒; \$25; DevonTechnologies, www.devon-technologies.com

Top Products

YOUR GUIDE TO THE BEST HARDWARE WE'VE TESTED



HARD DRIVES

Desktop

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
AV Drive www.caldigit.com	🔒🔒🔒🔒	\$195 (1TB)	USB 3.0	6757
iT1 Dock www.istoragepro.com	🔒🔒🔒🔒	\$329 (2TB)	quad interface	5843
My Book Studio (pictured) www.wdc.com	🔒🔒🔒🔒	\$170 (2TB)	triple interface	6849



HARD DRIVES

Portable

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
eGo Mac Edition go.iomega.com	🔒🔒🔒🔒	\$100 (500GB)	triple interface	5219
FreeAgent GoFlex Ultra-Portable Drive (pictured) www.seagate.com	🔒🔒🔒🔒	\$70 (500GB)	single interface	6631
Iomega eGo BlackBelt Mac Edition go.iomega.com	🔒🔒🔒🔒	\$190 (1TB)	double interface	7013



INPUT DEVICES

Keyboards, Mice, Pen Tablets

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
Intuos4 Wireless intuos.wacom.com	🔒🔒🔒🔒	\$385	pen tablet	6422
Magic Trackpad www.apple.com	🔒🔒🔒🔒	\$69	trackpad	6436
TactilePro 3 (pictured) www.matias.ca	🔒🔒🔒🔒	\$150	keyboard	6421



PRINTERS

Laser

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
5130cdn (pictured) www.dell.com	🔒🔒🔒🔒	\$1549	LED, color	6009
C544DN www.lexmark.com	🔒🔒🔒🔒	\$298	LED, color	4356
HP Color LaserJet CP2025dn www.hp.com	🔒🔒🔒🔒	\$300	LED, color	4823



PRINTERS

MultiFunction

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
Artisan 725 Arctic Edition (pictured) www.epson.com	🔒🔒🔒🔒	\$200	inkjet	6758
Color LaserJet CM1312nfi www.hp.com	🔒🔒🔒🔒	\$356	laser	5183
Pixma MG5220 www.usa.canon.com	🔒🔒🔒	\$99	inkjet	6850

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SSD Drives Difficult to Erase Securely

Current methods for securely wiping data from magnetic hard disks simply aren't reliable enough to use on solid-state drives (SSDs), a detailed study by engineers at the University of California, San Diego, has found.

The researchers tested 12 unnamed SSDs, and found that only four of them successfully erased the whole test drive. The results for wiping a single file were similarly poor, with between 4 to 75 percent of the data recoverable.

The core of the problem is that, unlike magnetic media, SSDs save data to physical pages but erase it from logical block addresses (LBAs), a process that is managed through a flash translation layer (FTL). This creates a mismatch between where the ATA or SCSI drivers think the data is and where it physically resides. The drives compensate for that by copying data around, and this copying leaves traces littered throughout the drive.

The degree of difficulty involved in securely wiping single files from SSDs will alarm IT admins most, because users will encounter this task virtually every day—for example, when trying to destroy encryption keys, spreadsheets, and other important files without nuking the whole drive.—**JOHN E. DUNN**

Google Enhances E-mail Security in Apps

Google has taken a step to stop legitimate e-mail messages sent by its Apps customers from getting caught in spam filters. Administrators for Google Apps (www.google.com/apps) can now enable digital signing of those messages, which helps recipients verify that the messages came from a known, vetted sender, wrote Adam Dawes, a Google Enterprise product manager, on a company blog.

The system uses DKIM, or DomainKeys Identified Mail, which verifies the domain name through which a message was sent by analyzing the message's cryptographic signature. If the message comes from a domain that is considered reputable, it won't be filtered out. DKIM is free for Google Apps users. Administrators can turn it on by going to the control panel and then to the Advanced Tools tab, Dawes wrote.—**JEREMY KIRK**



Drobo Aims Storage Arrays at Small Businesses

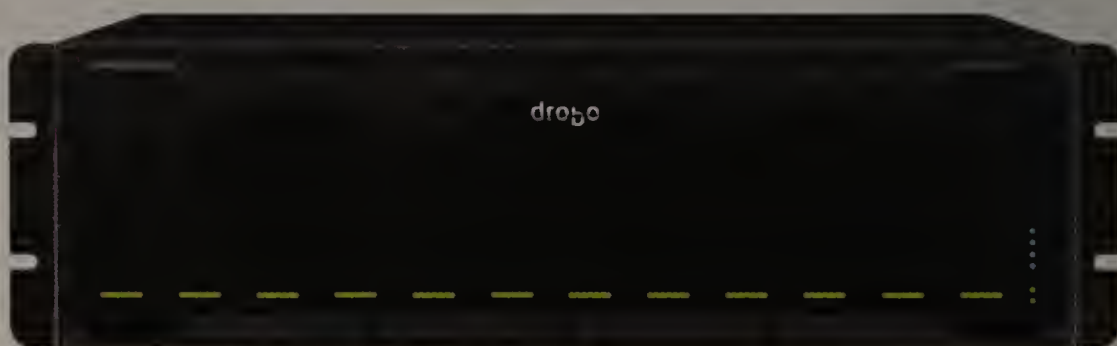
Drobo (www.drobo.com), a storage company that made its mark selling easy-to-use arrays to consumers, announced a new line of products aimed at small- and medium-size businesses. The three new arrays offer up to 36 terabytes of storage capacity in a single unit.

Unlike with its past products, Drobo has added additional capacity with an eight-bay and 12-bay storage box and has also increased the sophistication of its software with tools such as thin provisioning, automated tiering, and data deduplication.

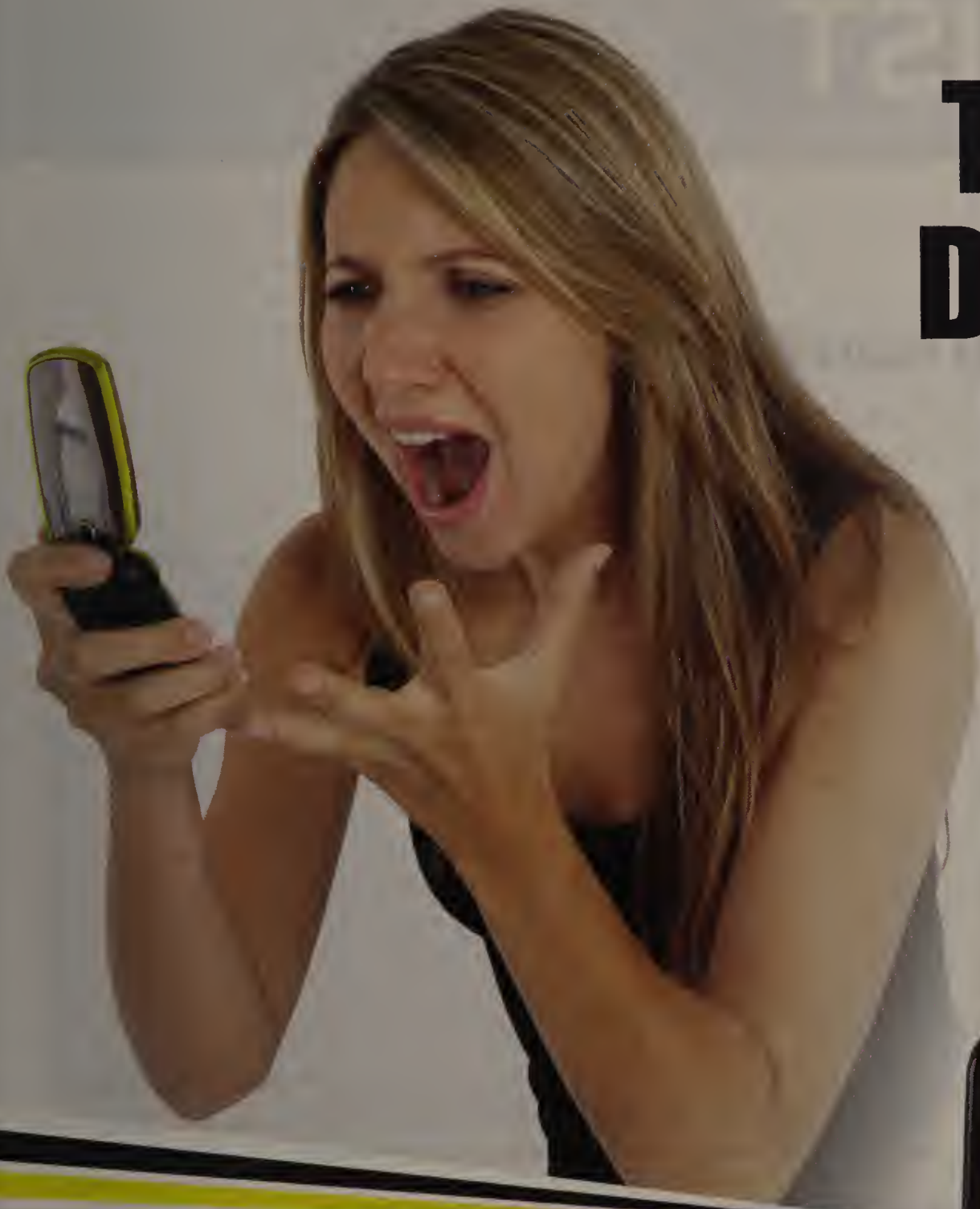
The products, however, continue to feature hot-swappable drives, LED lights that indicate how full the disk drives are, and simple dashboard interfaces indicating performance levels.

There are three versions of the new arrays. The Drobo B800fs is an eight-bay NAS (network-attached storage) device with remote backup; the Drobo B800i is an eight-bay iSCSI SAN (storage-area network) device; and the Drobo B1200i is a 12-bay iSCSI SAN with expanded redundancy features, support for thin provisioning and deprovisioning, and new automated data-tiering technology. The automated tiering feature moves data from high-end disk to lower-end disk according to its business importance.

Depending on the configuration you choose, the new arrays cost between \$2000 and \$10,000.—**LUCAS MEARIAN**



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PLAYLIST

Everything You Need to Know about iPods, iTunes, and Mac-based Entertainment

Rip a DVD with HandBrake

Use free software to enjoy your movies on the go

BY JONATHAN SEFF

Editor's note: The MPAA (Motion Picture Association of America) and most media companies argue that you can't legally copy or convert commercial DVDs for any reason. We (and others) think that if you own a DVD, you should be able to override its copy protection to make a backup copy or to convert its content for viewing on other devices. Currently, the law isn't entirely clear one way or the other. So our advice is this: If you don't own it, don't do it. If you do own it, think before you rip.

Looking to liberate the movies in your DVD collection from the confines of their plastic-and-metal prison so you can enjoy them on your iPhone, iPod, iPad, and Apple TV? Well look no further—all you need to do is get your hands on some free software and follow these steps:

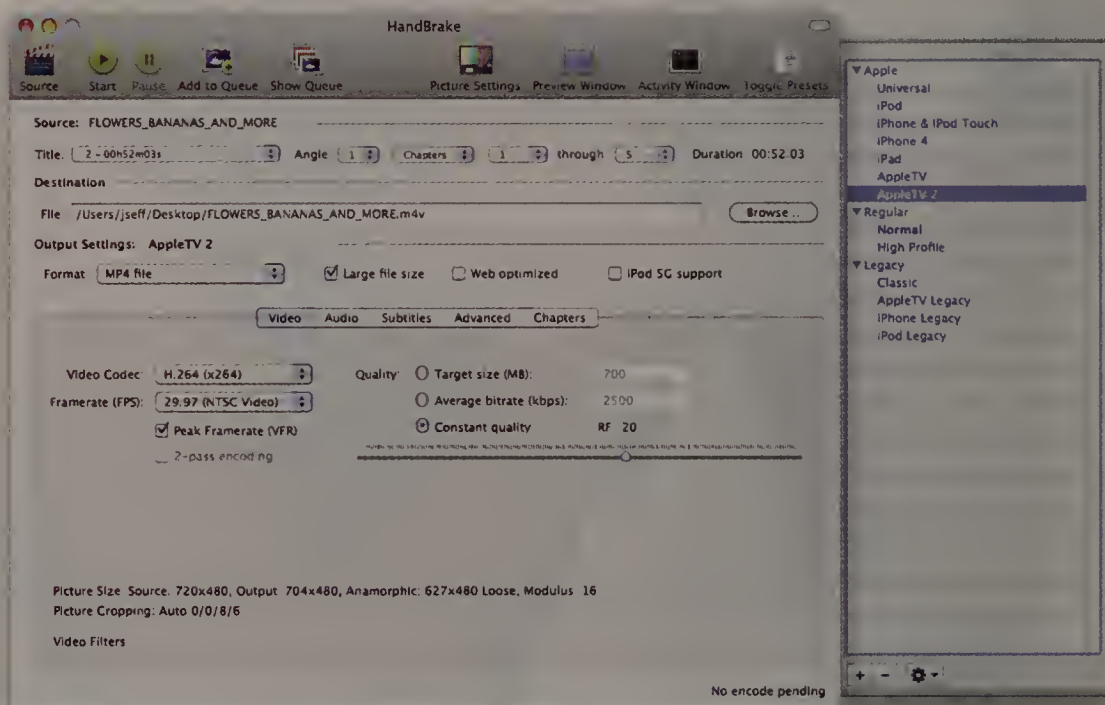
Step 1: Install the Software

To rip a DVD with HandBrake, you'll need to download the free software (handbrake.fr). If you have a Mac with a Core 2 Duo or better processor, make

Although you can tweak every aspect of encoding, HandBrake includes handy presets that make things much easier.

sure you get the 64-bit version of the software to speed up your ripping times. (It's faster than the 32-bit version.)

And because HandBrake no longer includes the libraries needed to decrypt commercial DVDs (you should rip only DVDs that you've purchased), you'll also need to install the equally free VLC media player (www.videolan.org).



HandBrake The free app includes presets for all of Apple's devices, but it also lets you tweak settings to save disk space, improve video quality, and more.

Step 2: Pick What to Rip

Now insert your DVD into your Mac's DVD drive and launch HandBrake. By default, the app will prompt you to select the DVD mounted on your Mac—choose it and click Open. HandBrake then scans the DVD for the titles it contains, which

Apple's DVD Player application, navigate to the main feature, choose Go ► Title from the menu bar, and find the title with a check mark next to it. Choose that title in HandBrake and continue.

If there are several items you want to convert—all the episodes on a TV show DVD, say—you can select one, give it a unique name in the File area, click the Add To Queue button, and then repeat the process for each item until they've all been added to the encoding queue.

(Note that HandBrake may not work with every DVD. You may need to purchase other DVD-ripping software to get better results [see "DVD-Ripper Roundup" at macworld.com/6990].)

Step 3: Choose a Preset

Although you can tweak every aspect of encoding, HandBrake includes handy presets that make things much easier.

can take a few minutes. Once the scan is complete, click the box next to Title and, from the pop-up menu that appears, choose the title with the longest time.

If you encounter a DVD with 99 titles of almost the same length, you've run into a copy-protection scheme meant to thwart ripping (see macworld.com/6989 for more on this). In that case, launch

If the Presets Drawer isn't already open, click on the Toggle Presets button at the top of the HandBrake window (or press ⌘-T). In the drawer, you'll see an Apple section. There you'll find Universal, iPod, iPhone & iPod Touch, iPhone 4, iPad, AppleTV, and AppleTV 2.

If you want to watch your movie on the latest iPhone, for example, choose iPhone 4 for the best-quality settings that will work on that device. The same goes for other devices. The Universal preset is helpful if you want a file that will work on all current Apple devices. If you're ripping multiple items from a DVD, you have to pick your settings for each file before adding it to the queue.

Step 4: Tweak Your Settings

Now, there are a few settings you might want to pay extra attention to.

Deinterlacing Many TV shows you'll find on DVD are *interlaced*—that is, shot as a series of half frames of even lines and odd lines, which can lead to jagged video when viewed on your computer or portable device. To overcome this, HandBrake can deinterlace while it rips, to smooth out the video. To do so, click the Picture Settings button. Click the Filters tab, and make sure the slider between Decomb and Deinterlace is to the right. In the drop-down menu next to Deinterlace, choose Fast (that's often good enough to fix the problem).

Audio Altering or removing audio tracks is a great way to reduce the size of

your finished file. Click on the Audio tab and look at the audio tracks your preset has selected to include. If your Apple TV isn't connected to a surround-sound audio system, you may want to remove a 5.1-channel audio track, for example.

Subtitles If your movie is in a foreign language, or you have a hearing impairment and need to read closed-captioning, HandBrake's Subtitles tab is the place to look. There you can find whatever subtitle or captioning data comes on your DVD and decide which ones you want to include in your ripped file. Typically, subtitles must be "burned into" your file, meaning that you can't turn them on or off, whereas closed-captioning data is added as a separate text track that you can choose while watching in QuickTime, for example.

When you're all set, click the Start button and go take a nice walk—depending on the length of the files and the speed of your computer, transcoding the video may take a while.

Step 5: Add Metadata

While this last step is very much optional, adding cover art, cast, summaries, and the like will make your movies or TV shows look and act a lot more like those you've purchased from the iTunes Store.

There are several applications that can look up metadata online and add it to your files. Rodney Kerstetter's free MetaX (www.kerstetter.net) is designed specifically for that purpose, but Chris

Marrin's free Video Monkey (videomoney.sourceforge.net) and Jendrik Bertram's \$25 iFlicks (macworld.com/7036) are video-encoding applications that you can also use just to add metadata. Once you're done, simply add the movie to your iTunes library and you're all set.



Previewing HandBrake lets you see what your video will look like with particular settings before you spend lots of time encoding.

Last.fm Charging for Mobile: Outrage or Inevitable?

BY CHRISTOPHER BREEN

As of February 15, music discovery service Last.fm (www.last.fm) started charging people listening via mobile apps and home entertainment devices such as Sonos and Squeeze-box \$3 per month.

The move isn't particularly surprising. All the music subscription services—Rhapsody, Napster, Mog, and Rdio—have introduced plans that allow you to stream (and download) their content to mobile devices for an extra fee. Last.fm could see the leap to mobile (a platform that eschews ads) as the appropriate time to charge a premium for some of its services, particularly because streaming is a large chunk of mobile media's future.

This may be a necessary move. People quickly get used to free content, and it's possible that Last.fm simply isn't generating as much revenue as it would like with its current ad-based-with-subscriptions-thrown-in-for-good-measure model. Pandora (www.pandora.com) currently offers a service similar to Last.fm and continues to provide that service for free. Of course, there's nothing preventing Pandora from also adopting this model.

There are other paths for users, too—Internet radio, music streamed from computers, the music they already own, or the less-savory standby: piracy.

In a world where many consider music valueless, outrage may spike Last.fm's plans—at least for now.

Last.fm

Spiffy Up Your Music with Album Art

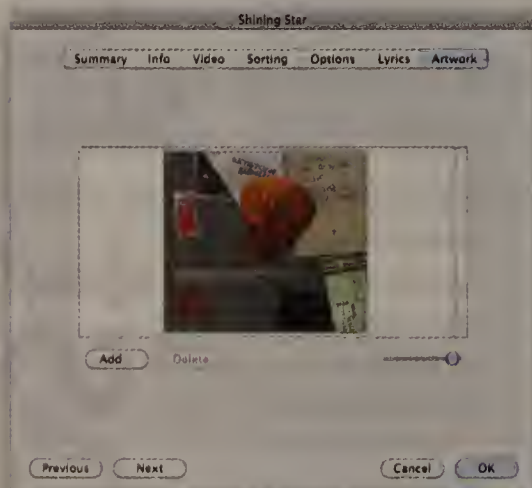
BY KIRK MCELHEARN

You can use Cover Flow in iTunes to scroll through your songs and albums, and iOS devices let you flick through your music in Cover Flow view with your fingertip. But to make it all work, you need to have accurate and attractive album art.

Find Album Art

To hunt down album art for tracks you've ripped yourself, you can employ one of several methods. The easiest way is to have iTunes do it for you (you'll need to set up an iTunes Store account if you don't already have one). As you rip a CD, you can have iTunes check the iTunes Store for album art. To do this automatically, select Automatically Download Missing Album Artwork in the Store pane of iTunes' preferences. After you finish ripping an album, iTunes will then connect to the iTunes Store and, if it finds the artwork, download it and add it to your library (note that this works only if the iTunes Store sells the album).

If iTunes can't find the art for an album you know it sells, check how the album is listed in the store, correct your metadata tags, select the tracks in iTunes, Control-click (or right-click) on them, and choose Get Album Art. iTunes will then check the store again. You can do this anytime for music that doesn't have album art.



Artwork Tab To add artwork to a track, select it, press ⌘-I (Get Info), click the Artwork tab, and drag the image to the art field.



Artwork Player

Clicking on the Artwork viewer when it says Now Playing displays an artwork player that you can use to control playback in iTunes.

To help you find all the tracks in your library that are missing art, Doug Adams's Tracks Without Artwork to Playlist 3.3 (payment requested; macworld.com/3342) AppleScript can create a playlist of these tracks.

If iTunes can't provide the album art you want, the best way to add it is to copy graphics from Websites. A good place to go is Amazon.com, which has cover graphics for most of the albums it sells. CD Universe (www.cduniverse.com) has large graphics at 450 by 450 pixels, with no white borders. And if you're a member of eMusic, you can get album art there at 600 by 600 pixels. And you can do a Google image search (images.google.com) and narrow down the results by image size.

Some apps can ease the art-searching process, including Equinux's \$40 CoverScout 3 (see "Mac App Store Favorites," page 54), TuneUp Media's \$20-a-year TuneUp (also available as TuneUp Gold, a \$30 lifetime single-computer license; macworld.com/6992), and Cloudbrain's \$39 TidySongs (www.tidysongs.com).

Add Artwork to Your Files

For single files, the easiest way to add artwork is to select a file in iTunes, press ⌘-I, and click on the Artwork tab. Either drag a file into the artwork box, or paste a file that you have copied from a Web page, for example.

For multiple files, select the ones to which you want to add album art and then press ⌘-I. You'll see the Multiple Item Information window. Drag or paste art into the Artwork box, and then click on OK to save it.

When you download album art from the iTunes Store, iTunes doesn't add the graphics to your files; instead, it puts them in a central folder on your computer. So if you copy a track to another computer, it won't have the album art. To get around this, select a track and then press ⌘-I. Click on the Artwork tab, click the album art to select it, and then copy it. Close the Info window, select all the tracks of the album, and paste the copied image. This embeds the art in the files, rather than keeping them separate.

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REVIEWS

Home Entertainment Hardware,
Software, and Accessories

HARDWARE

**Audyssey
South of
Market Audio
Dock** ▷

Audyssey's South of Market Audio Dock is a sleek, pricey speaker system for your iPod, your iOS device, or even your Mac. The \$400 unit sports both a dock-connector cradle and Bluetooth connectivity, and packs in plenty of features coupled with impressive sound. If you're looking for a high-end iPhone or iPod speaker dock, Audyssey's Audio Dock is definitely worth considering (macworld.com/6996).

★★★★; \$400; Audyssey Laboratories;
www.audyssey.com

**Monsoon Multimedia
Vulkano Deluxe** △

Overall, Monsoon Multimedia's Vulkano time-shifting DVR works pretty much as promised, with bandwidth being the major factor in getting great remote video. The device itself is far from perfect, though: For one thing, its inability to record all video in one high-definition format and then downsize it as needed for phones means that you have to choose a format in advance. And you have to dig into your network settings to make it all work (macworld.com/6997).

★★★★; \$280; Monsoon Multimedia;
www.monsoonmultimedia.com

**Samsung
C7000
Series
HDTV** ▷

The Samsung C7000 series 240Hz 3D LED

TVs are brimming with Web apps and are Wi-Fi-ready (add a LinkStick adapter, and



you're good to go). They also boast decent image quality; an attractive, superslim design; and a remote that resembles an old Razr phone. If you're in the market for a set that looks good when it's turned on, but even better when it's turned off, the Samsung C7000 series might be a better choice for you than rival sets. And if 3D TV is in your future, this HDTV won't disappoint you either, especially considering its \$1200 to \$1700 street-price range (macworld.com/6998).

★★★★; \$2000 to \$3300; Samsung;
www.samsung.com

**Sony Internet TV
Blu-ray Disc
Player
(NSZ-GT1)** ▷

Even in a world where every Blu-ray player has an Internet connection and several streaming options, Sony's NSZ-GT1 stands out. You can thank Google TV—which is Android for your television—for that. But lackluster image quality, a very high price tag, some poor



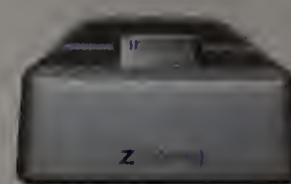
design choices, and an infuriating remote control make this model a questionable choice—especially when matched against players that are less expensive and have higher image quality (macworld.com/6999).

★★★★; \$400; Sony; www.sony.com

**ZDocks
BaseDock** ▷

If you need a docking station for your iPod or iPhone, the BaseDock gets the job done. At \$49 (or \$85 for two), it's a somewhat pricey add-on; but keep in mind that Apple sells a \$29 dock that works only with the iPhone 4, and otherwise charges \$59 for its Universal Dock (which also includes an Apple Remote and a USB power adapter). Add to that another \$9 for a set of inserts if your iPhone or iPad isn't one of the few for which Apple includes adapters, and the BaseDock's price doesn't seem all that unreasonable (macworld.com/7000).

★★★★; \$49; ZDocks; www.z-docks.com



iPods: Current Lineup

PRODUCT	SPECS	RATING	PRICE ^A	DISPLAY	PERFORMANCE	FIND CODE ^B
iPod Classic	160GB	★★★★	\$249	2.5-inch color	36 hours of music playback; 6 hours of video playback	5262
iPod Touch	8GB	★★★★	\$229	3.5-inch color (Retina)	40 hours of music playback; 7 hours of video playback	6553
	32GB	★★★★	\$299	3.5-inch color (Retina)	40 hours of music playback; 7 hours of video playback	6554
	64GB	★★★★	\$399	3.5-inch color (Retina)	40 hours of music playback; 7 hours of video playback	6555
iPod Nano	8GB	★★★★	\$149	1.5-inch color	24 hours of music playback; 5 hours of video playback	6551
	16GB	★★★★	\$179	1.5-inch color	24 hours of music playback; 5 hours of video playback	6552
iPod Shuffle	2GB	★★★★	\$49	none	15 hours of music playback	6550

^A All prices are Apple's prices. ^B In a browser's address field, typing a find code after macworld.com/ takes you to a product's review or overview.



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DIGITAL PHOTO

Techniques and Gear for Shooting, Editing, and Managing Great Photos

Online Backup Options for Photographers

Save your images from disaster by making supplemental online backups

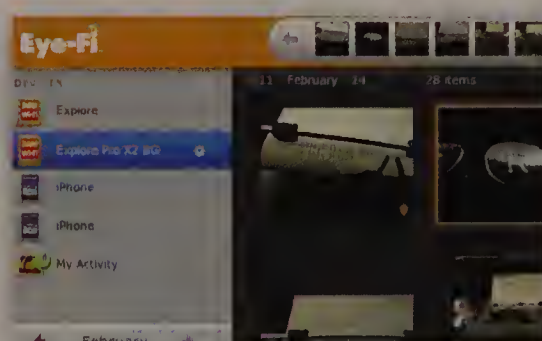
BY GLENN FLEISHMAN

Advancements in digital photography have made it easier than ever for you to protect your images with regular backups from a home or work computer to an external hard drive. But for you on-the-go photographers, augmenting that setup with an online service so you can back up from the field and on the road is important.

Send It Home with the Eye-Fi

Your photos are at greatest risk right after you've taken them, but before you've transferred them to another location. If you're unable to immediately offload images to your backup disk, you may find a wireless upload system like the Eye-Fi (www.eyefi.com) useful.

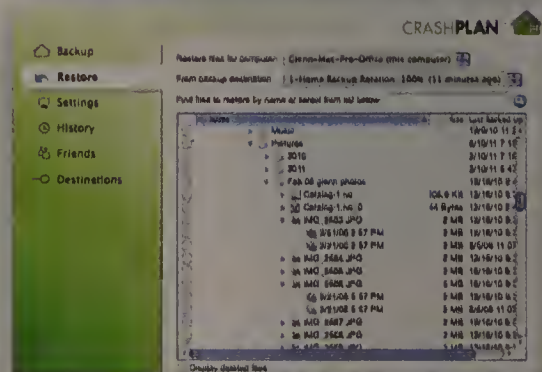
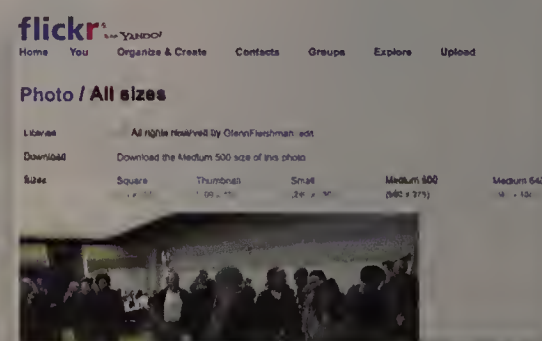
With models ranging from \$50 to \$150, the Eye-Fi is an SD card with built-in Wi-Fi radio. After you shoot, the card uses a secured Wi-Fi network you've preconfigured, or one of Eye-Fi's for-fee hotspot locations, to upload your photos. You can wirelessly upload photos to 25 different image-sharing sites—including Facebook (facebook.com), MobileMe (me.com), and



Version History of 'fleishman_nov10-547.tif'

Dropbox keeps a snapshot every time you save a file. You can preview and re-

Changed	Event	Changed by
12/28/2010 3:10 PM (current)	Edited	Glenn Fleish
12/28/2010 3:06 PM	Added	Glenn Fleish
12/28/2010 3:06 PM	Deleted	Glenn Fleish



Safe and Sound The Eye-Fi, Flickr, Dropbox, and CrashPlan all provide ways for you to back up your images online for sharing and protection.

You can wirelessly upload images to 25 different image-sharing sites, including Facebook, MobileMe, and Flickr.

Flickr (flickr.com)—or to a computer, depending on the way you've configured your setup. Every Eye-Fi model can transfer JPEGs and several kinds of movie files, and the most expensive card—the Pro X2—can also handle raw files.

If you want to upload selectively, you can configure the software to transfer only images and video that have been tagged.

year's worth of unlimited storage and photo- and video-sharing costs \$50.

Sync to the Cloud

Cloud syncing services—which allow you to wirelessly transfer and store data online—have become both affordable and popular in the last few years. With Dropbox (dropbox.com) or SugarSync

(sugarsync.com), you can store a copy of your photo library, duplicate individual images, or even upload pictures from your iOS device.

Dropbox offers 2GB of free storage, and charges \$10 per month for 50GB or \$20 per month for 100GB. By default, Dropbox backs up older versions and deleted files for 30 days; if you're a paying user, you can enable the Pack-Rat option in Preferences to keep these files forever.

SugarSync has a 30-day free trial with 30GB of storage or a 5GB free plan. For-pay plans start at \$5 per month for 30GB and go up to \$50 per year for 500GB. Deleted files are kept indefinitely.

Share and Archive

While a photo-sharing service isn't the most reliable primary backup method, it

does provide an excellent supplemental prong in your backup attack.

A free account from Flickr isn't the ideal backup option, because it lets you retrieve only your 200 most recent uploads. The \$25 per year Flickr Pro gives you complete downloadable access to your full photo collection and provides unlimited photo and HD video uploads. Flickr stores the original file in GIF, JPEG, or PNG format; other file types are converted to JPEG for storage.

Unless you request that the company erase your account, Flickr Pro retains your full photo collection—even if you don't renew the membership.

If you move services, everything you add to Flickr can be extracted, along with its image metadata. Third-party printing service Qoop (qoop.com) can create DVD backups from your Flickr data for \$15 per CD or \$20 per DVD; my personal collection of over 9000 photos would theoretically fit on just five DVDs.

SmugMug (smugmug.com) offers three for-pay options: Basic (\$5 per month), Power (\$8 per month), and Pro (\$20 per month). All accounts allow unlimited uploads of JPEG, PNG, and GIF images; the Power and Pro accounts support any HD video shorter than ten minutes.

You can download each uploaded gallery in full by clicking the Download All option from a generated e-mail link. Of the nonstandard image formats, SmugMug also offers SmugVault, which will back up raw files, PSDs, and videos.

SmugMug charges a fixed \$1 per month in addition to separate storage and data-transfer fees. Each gigabyte of storage alone will cost you 22 cents; to move photos into storage, it'll cost you 30 cents per gigabyte; to copy them out, you'll pay another 51 cents per gigabyte.

Double the Backup, Double the Fun

If you want to make sure your images and other files are secure from multiple angles, you can use Code 42 Software's CrashPlan (crashplan.com) to back up your computer both locally and online.

The CrashPlan software is free for making local backups of your photos to an external hard drive; the company's

for-pay service, CrashPlan+, adds additional features to the software such as scheduling options and better encryption, but more significantly, it gives you Internet-based storage.

Storing up to 10GB online from a single computer starts at \$2.50 per month, while unlimited storage for one computer is \$5 per month and unlimited backup for two to ten computers runs \$12 per month. (Sign up for a one-year or longer contract, and you can greatly reduce the monthly fees.)

Using CrashPlan's Backup Sets option, however, you can store a full clone of your computer on an external drive, and only send the bare essentials over the Internet so as to reduce your storage and bandwidth costs.

If you'd like a clone of your entire drive to be stored online, you can pay \$125 to \$165 for Code 42 to send you an empty 1TB drive for your initial backup (the cost varies by shipping). After filling the drive, ship it back, and the company will seed your archive with those files.

If you need to restore a file from the online backup, you can use the CrashPlan software to bring it back to your computer; if you want a full hard copy of your files, you can pay a fee (again, around \$125 to \$165, depending on shipping) for Code 42 to ship up to 1TB of compressed files back to you.

Back Up before It's Too Late

It's likely you're accumulating gigabytes to tens of gigabytes of photographs and video a month if you're shooting or recording regularly. Even if you habitually toss out bad images and clips, the rest of your collection will need some sort of protection.

Accidents happen. If you don't protect your photos, you might suddenly find yourself bereft of your digital memories.

Senior Contributor **Glenn Fleishman** writes frequently for *Macworld*, is the technical editor at TidBits, and is the author of several books, including *Take Control of iPhone and iPod Touch Networking and Security*, iOS 4 edition (TidBits Publishing, 2011).

Macworld's Top Camera Picks

We test, review, and compare all new cameras on Macworld.com. To find the top-rated models, check out these lists, organized by category.



Basic Point-and-Shoot ▲
macworld.com/7042



Advanced Point-and-Shoot ▲
macworld.com/7043



Megazoom Point-and-Shoot ▲
macworld.com/7044



Compact Interchangeable Lens ▲
macworld.com/7045



DSLR ▲
macworld.com/7046



Pick a Subject Instead of trying to cram too many elements into a photo (left), crop in to simplify and make the subject clearer (right).

Compose Yourself

Instantly improve your photos with a clear subject, good balance, and a smart crop

BY BEN LONG

Composition isn't just how you choose to frame a shot. It's the process of arranging the elements in a photo so that the viewer can more easily understand your image. Rather than memorize a list of composition tricks—such as the Rule of Thirds—think about composition as the process of making your subject clearer and your image less complicated. No matter what composition rules you follow, clarity of subject should always be your main goal.

Pick a Subject

This is the most important composition concept to remember: Your image must have a subject, and the subject must be obvious to the viewer. Getting a clear subject and background is the most common problem for beginners.

For example, you might say of the above image on the left, "This picture has a subject. It's my friend Hans." But the picture also has a beach, some other people, and the Golden Gate Bridge, one of the greatest engineering feats of all time. Any of those are worthy of being the subject. As a photographer, you have to choose whether your subject is going to be the person, or the bridge—you can't have both as a subject.

The recomposed shot on the right is framed so that Hans is clearly the subject. We've still got the bridge in the image and a general sense of the place, but more importantly we have a very clear subject and background.

Another reason the background is not distracting is that it has been thrown out of focus. A shallow depth of field is a great tool for separating your subject from its surroundings. See "How to Use Depth of Field to Take Better Pictures," at macworld.com/7047, for more.

Be Aware of Balance

As you organize the components of a shot, keep an eye on the balance of your image. Different things in a photo have a different compositional *weight*, and you need to balance them.

You don't just have to balance an image in terms of people and objects; light and shadow can also work to create balance. For example, think of an image that is half in shadows and half in bright light.

It's fine to let shadows fall into total blackness. We don't necessarily need to see all the details there. The goal is to reduce clutter and simplify, so if letting portions of the image fall into darkness helps simplify your image, then work with it.

Get Closer

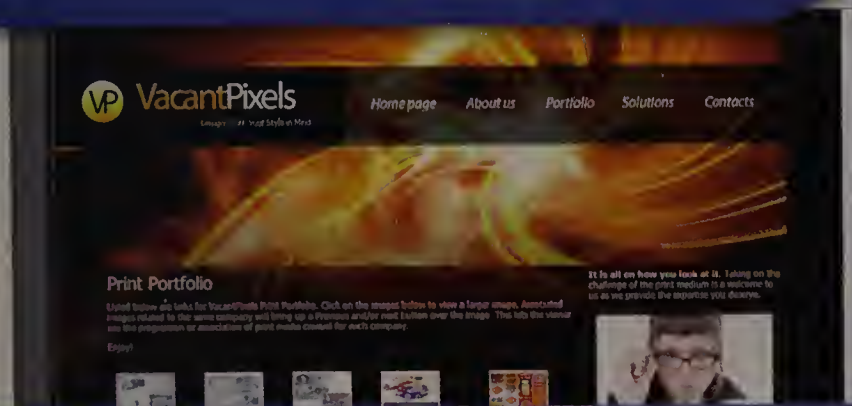
The trickiest part of getting a good photo isn't fitting what you want in the frame, but rather keeping what you don't want out of the frame. In photography, less is almost always more. Before you shoot, trace your eyes around the edge of the frame and ask yourself if you need everything that's there.

If you're unsure of how close you want a final image to be, you can do the cropping once you upload the image to your computer. Composition doesn't just happen while you're shooting. By using the crop tool in your photo editor, you can reframe your shot later, effectively recomposing it. Through cropping, you can eliminate clutter, or rebalance your image. Sometimes you shoot with the idea of cropping later, because you can't get the shape you want in-frame—for example, if you want a wide landscape.

But whenever possible, you should try to compose correctly in-camera—if you have to crop later, you'll be throwing away pixels, and therefore reducing your maximum print size.

Senior Contributor **Ben Long** is the author of *Complete Digital Photography*, fifth edition (Charles River Media, 2009).

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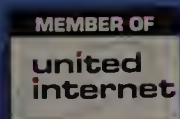
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Make Your iPad a Photo Powerhouse

These apps turn the iPad into a powerful tool for photographers

Photographers have found a lot of uses for the iPad: It can be a portfolio, an on-the-go image editor, or a really beautiful file storage device. We found two apps that let photographers do more than ever before on the iPad, including editing metadata and seeing a live view of their DSLR.

Sort Shots

The iPad's minimal design and high-resolution screen make it an ideal portable portfolio for photographers. Unfortunately, the built-in Photos app offers a limited set of tools for organizing. There are no options for sorting on the go, or rating and tagging images.

Sort Shots iPad Edition (\$5; macworld.com/7048) is an organizing and viewing app for photos and videos that picks up where the Photos app leaves off. Sort Shots has the ability to tap into and edit existing metadata and EXIF tags—a feature iPad-owning photographers have long been clamoring for.

This means that you can find, order, and show photos and videos according to various metadata such as keywords, date taken, and rating. It's also easy to create custom slideshows on the iPad. Any new ratings, keywords, or filenames that

are added are kept intact upon export.

You can import photos into the Sort Shots library through iTunes, directly from the Photos albums, or over the free Sort Shots FTP client. All metadata is imported with the image, so if you added keywords or a star rating in Aperture, that information will appear in the app.

When you've come up with a combination of search terms you want to keep (for example, all photos tagged "kittens" that are rated three stars), you can save it as a custom sort. For professional photographers, this is a great way to save custom portfolios.

The Sort Shots app works with most popular photo-management applications, including Adobe Lightroom and Bridge, Nikon's Capture NX, and Apple's Aperture and iPhoto. —HEATHER KELLY

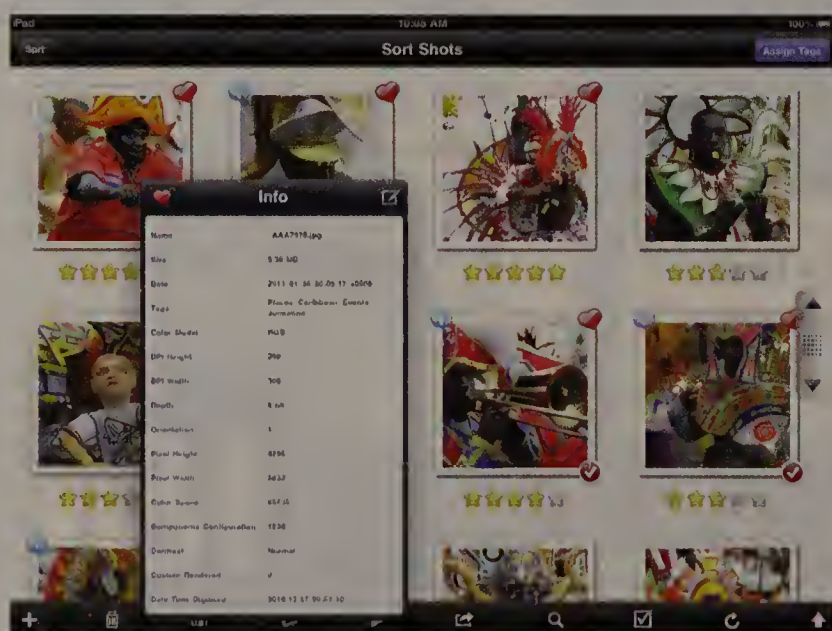
DSLR Camera Remote HD

If you're a serious iPad-toting, DSLR camera user looking to broaden your photographic horizons, OnOne Software's DSLR Camera Remote HD (\$50; macworld.com/7049) app for the iPad could be a valuable tool in your arsenal. The app—an iPad-optimized version of OnOne's existing DSLR Camera Remote app—works in conjunction with a

Wi-Fi-enabled computer and compatible Nikon or Canon DSLR camera to let you instantly adjust your camera's settings, fire the shutter, review images, get a live viewfinder preview, and record video from the cozy confines of your iPad.

A computer is required to act as a bridge between your iPad and your DSLR—OnOne offers free server software for Mac OS X and Windows that facilitates the connection between the iPad and the DSLR. Once you've established the connection, you will be able to use the iPad's spacious display to view your camera's viewfinder in real time, snap photos, review your images, and adjust camera settings like white balance, shutter speed, aperture, and exposure compensation.

The app also features an Auto Bracketing mode for expanded exposure brackets, a Burst mode for continuous shooting, and the ability to save low-res versions of images for e-mailing and sharing. The app supports a wide range of Canon EOS cameras and Nikon D series cameras, though features vary depending on your camera. Make sure your camera is supported since, at \$50, DSLR Camera Remote HD is one of the pricier apps available for the iPad. —DAVID DAHLQUIST



Tools of the Trade Two iPad apps let you do more with your photos: Sort Shots (left) taps into the power of metadata to give you advanced image-editing and -organizing powers. DSLR Camera Remote HD (right) turns the iPad into a powerful remote for Canon and Nikon DSLRs.

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REVIEWS

Hardware, Software, and Accessories
for Making and Managing Photographs



HARDWARE

Nikon Coolpix P7000 ▴

When you're behind the lens of the 10-megapixel Nikon Coolpix P7000, you almost feel like you're at the helm of a jet. The camera is peppered with physical buttons, offering fast access to manual settings via a cockpit-like array of controls. DSLR owners will feel right at home behind the wheel of the Coolpix P7000, which offers great image quality to go along with those extensive imaging controls. Because the P7000 puts all of its manual controls front and center, it also has the most challenging learning curve. Novices are bound to be a bit intimidated by its array of buttons and dials. The image quality of the P7000 is superior, with some of the sharpest shots we've seen from any comparable camera (macworld.com/6952).

★★★★; \$500; Nikon, www.nikonusa.com

Nikon D3100 ▴

The D3100 falls in line just above Nikon's other entry-level DSLR, the D3000. It has some fresh features that make it a very attractive option for photographers who are starting out, including 1080p HD video, and continuous autofocus in Live View and movie modes. A smart, simple design and a clear and helpful Guide Mode combine with Nikon's good image quality to make it an ideal camera for new DSLR users who want to learn the basics. However, if you're primarily



interested in the D3100 for its continuous autofocus abilities in movie mode, be warned that this feature is quite loud (macworld.com/6951).

★★★★; \$700; Nikon, www.nikonusa.com

Panasonic Lumix DMC-LX5 ▴

The Lumix LX5 is a larger-than-average point-and-shoot camera. The 10-megapixel LX5 backs up its f/2.0 ultra-wide-angle, 3.8X zoom lens with manual controls for both still shots and video, a



great macro mode that practically lets you touch the lens to your subject, fast access to focus controls, and a button layout that provides easy access to in-camera settings. You'll be glad you have so many manual options to choose from, because the LX5 isn't a great performer when it's set to Intelligent Auto mode. Video quality, on the other hand, is excellent at the camera's automated settings. On the back is a 3-inch LCD screen for framing your shots, but there's no optical viewfinder (macworld.com/7050).

★★★★; \$500; Panasonic, www2.panasonic.com

Top Products YOUR GUIDE TO THE BEST HARDWARE WE'VE TESTED



DIGITAL CAMERAS SLR

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
60D www.canon.com	★★★★	\$849	18-megapixel	6805
A580 (pictured) www.sonystyle.com	★★★★	\$849	16.2-megapixel	6807
EOS 7D www.canon.com	★★★★	\$1645	18-megapixel	6014



DIGITAL CAMERAS Point-and-Shoot

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
HZ35W (pictured) www.samsung.com	★★★★	\$320	12-megapixel	6331
PowerShot S95 www.canon.com	★★★★	\$370	10-megapixel	6804



PRINTERS Inkjet

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
Officejet Pro 8000 Wireless (pictured) www.hp.com	★★★★	\$94	document, photo	6017
PictureMate Dash PM 260 www.epson.com	★★★★	\$106	snapshot, photo	5609

^A All prices are the best current prices taken from a PriceGrabber survey of retailers at press time. ^B In a browser's address field, typing a find code after macworld.com/ takes you to a product's review or overview.

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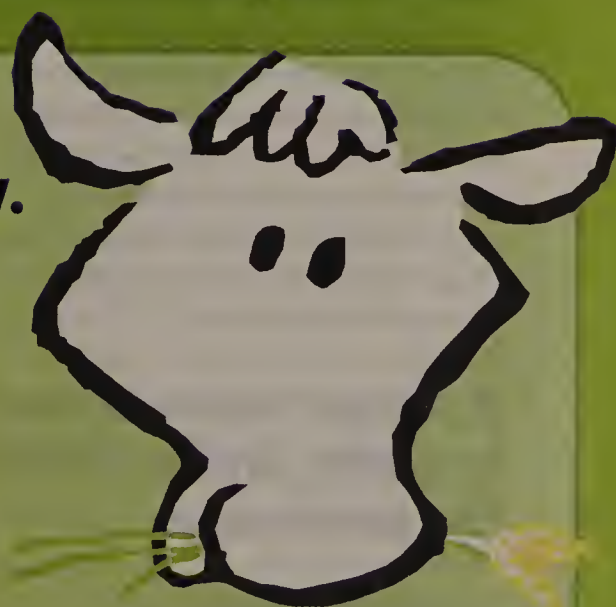
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Go Hollywood with iMovie '11 Trailers

From storyboards to credits, this new feature offers easy-to-use templates for major movie genres

BY JEFF CARLSON

When you consider the amount of work required to make your own movie trailer from scratch, the new Movie Trailers feature in iMovie '11 will amaze you. In just a few minutes, you can create a short film with production values that rival what you see on the big screen.

But is that all there is to iMovie's trailers? Did Apple put in what is obviously a lot of work—many of the soundtracks were recorded by the London Symphony Orchestra, for heaven's sake—simply to build a fun little feature that lets you, in mere minutes, create a movie that's only a minute or two long?

Fortunately, the answer is no. Movie Trailers offers a lot more power than is apparent at first glance—you can fine-tune edits, customize cast members, and even use the trailer as a starting point for a larger project. The following sequence assumes that you already know the basics of creating a movie trailer. If not, consult the iMovie Help before embarking on the project below. To start with step 1, you need to have already created a project and chosen a trailer template.

A studio movie trailer offers a taste of what's to come, and an iMovie trailer can function the same way.

1. Fine-Tune Edits

When you're choosing footage for a scene, don't worry about highlighting the precise 1.3 seconds (or whatever the duration is) that you want to appear; just select a rough range of frames within the clip you want to use. To



Clip Adjustments Double-clicking a clip in the Storyboard interface lets you apply video or audio effects.

change the frames that are included, do the following:

First, in the Storyboard tab of the Project browser, position your mouse pointer over the clip you want to edit.

Then, click the blue button that appears at the lower left of the clip when you hover the mouse over it. The Clip Trimmer drops into view over the Event Library and the Event browser. (Two other buttons on the clip are also visible: One at the upper left mutes or

unmutes the clip's audio, and a curved arrow at the upper right removes the footage and displays the placeholder animatic.)

Next, drag the active area to a new position within the overall clip. The scene's duration time doesn't change, so all you can do is slide the highlighted area within the clip. (Here's a tip: To quickly preview the footage, press the forward-slash [/] key.) Click Done to make the change.

2. Apply Clip Adjustments

Double-click a clip in the Storyboard interface to call up iMovie's familiar Inspector, which facilitates clip adjustments such as applying video or audio

effects, enabling image stabilization, and tweaking colors and audio. For example, you can set all clips to be black and white in a Film Noir-themed movie trailer.

Similarly, select a clip in the Storyboard and then click the Crop button in the toolbar to crop, rotate, or apply the Ken Burns effect to the footage.

3. Move or Duplicate Clips

Would a clip you've already placed work better in another spot in the Storyboard? Just click and drag the clip to another location. If that new destination already has a clip, the new one replaces it. If you hold the Option key as you drag, iMovie creates a duplicate—helpful if you want to use a separate section of the same scene.

4. Change Cast Members

Every movie-trailer type includes cast members, but a few let you add or subtract characters; iMovie now offers multiple soundtracks to accommodate different numbers of cast members. In the Blockbuster, Friendship, and Travel trailers, go to the Cast list in the Outline view and click the add (+) or subtract (–) button to the right of a cast member's name. You can have as few as two and as many as six identified characters.

In the Pets trailer, use the Pet Type field to specify Dog, Cat, Horse, or even Monster. The animal tracks that appear in the text screens reflect your choice.

5. Convert Trailer to Project

A studio movie trailer offers a taste of what's to come, and an iMovie trailer can function the same way. To use the trailer as a jumping-off point for editing the full version of your movie, choose File ► Convert To Project. (I recommend first duplicating the trailer project—choose File ► Duplicate Project in the Project Library—so that you don't lose the trailer.)

The trailer becomes a regular iMovie project, with all edits appearing in the Project browser—as if you had spent a lot of time building it manually.

Jeff Carlson is the author of *The iMovie '11 Project Book* (Peachpit Press, 2011) and is a senior editor of TidBits.



Load the Toolbox GarageBand will load your project with five preconfigured tracks. Choose a preset, and the name of the track will change to match it.

Customize Your GarageBand Templates

BY JAMES GALBRAITH

GarageBand offers a number of project templates to help you start recording quickly.

The Songwriting template, for example, loads a vocal track, an acoustic guitar, a piano, a muted bass, and a drumset into your project. The Electric Guitar template loads a single guitar and the Clean Combo guitar amp with a couple of stomp-box effects set up. That's a great start, but it isn't the set of instruments and presets that I use to write my songs.

To avoid tweaking the presets each time I launch GarageBand, I create my own templates. Here's how.

1. Launch GarageBand '11 and select New Project. In the New Project window, select the Songwriting project template and click the Choose button.

2. GarageBand will ask you to name this new project. Type in a name, change any tempo or song preference, and click the Create button.

3. GarageBand will load your project with five preconfigured tracks. Track 1 is Voice. Click on the track, and you'll see that the column on the right shows the blue Real Instrument

window with the Browse tab open and Voice selected. You can pick any of the vocal presets, like Live Performance or Male Rock Vocals, and the name of the track will change to match that preset. (If you don't see this column, click the Info button at the bottom of the window.)

Repeat this step with all of the tracks until your personal toolbox is loaded. Remove any track you don't want by selecting it and pressing ⌘-Delete (or ⌘-Backspace, depending on the keyboard) on your Mac's keyboard (or from the main menu, choose Track ► Delete Track).

4. Once everything is set, save your template. Locate the template file you created and drag it to your Dock.

The next time you want to use your template, instead of clicking on the GarageBand icon, click your template icon instead. GarageBand will launch and your new template will open.

Be sure to promptly choose Save As from the File menu and give the file a new name to avoid making accidental changes to your template as you work on your piece.

Quark Launches QuarkXPress 9

Publishing app transitions into multiplatform publishing system for print and dynamic designs

BY JACKIE DOVE

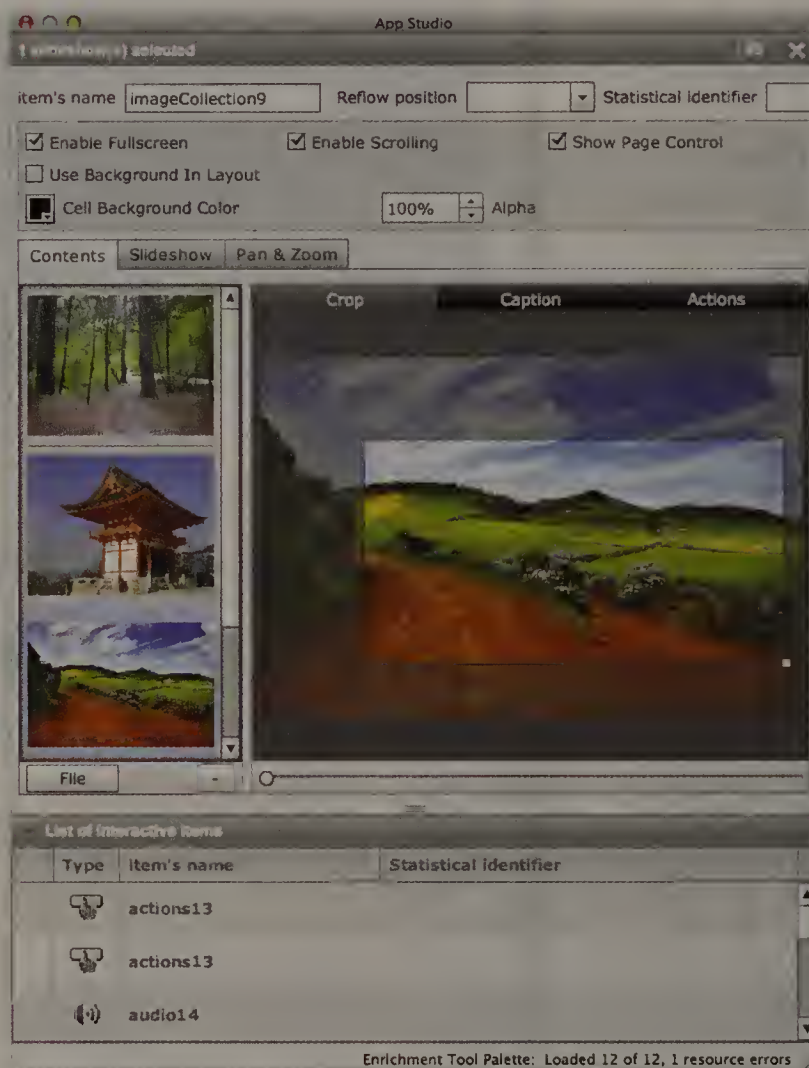
Quark has announced version 9 of QuarkXPress, its graphic design and page-layout application. Nearly three years in the making, and buttressed by a series of updates and publishing initiatives, the new version of the 24-year-old software package aspires to compete not only in the realm of print and online publishing, but also in *dynamic publishing*—the digital publishing of rich, interactive content to a variety of mobile devices in multiple formats. As part of the company's digital publishing 2.0 strategy, XPress 9 aims to give creative professionals more control over the execution of their designs via a single tool that negates the need for coding or programming expertise.

XPress 9—which will integrate the new App Studio and Blio e-reader design functionality—will allow designers to publish directly to the iPad and eventually other tablets, as well as to e-readers, smartphones, and other cross-media systems. XPress 9 will also offer new design-automation features for producing multimedia documents and periodicals for print, Web, and interactive Flash (SWF) media.

App Studio

One far-reaching innovation for XPress 9 is App Studio for QuarkXPress, unveiled in mid-January. This feature lets designers with no technical development expertise publish to the iPad directly from XPress. App Studio offers interactive features such as video and audio players, slideshows, scrollable regions, Web overlays, pop-up windows, buttons, hyperlinks, and more.

While App Studio is officially part of XPress 9 at launch, it will be available only as a free add-on sometime during the first 90 days after the product ships. Until then, Quark is offering its iPad Publishing Service for QuarkXPress, and Apple's Mac App Store is offering App Studio to users of the enterprise Quark Publishing System.



App Studio Palette

Designers can use App Studio to create custom designs for iPad applications and periodicals without having to possess any coding expertise.

The pricing scheme for the new App Studio was still being finalized at press time, but it will likely be in line with the per-issue pricing set for App Studio for Quark Publishing System.

E-reader and ePub Publishing

XPress 9 will also let designers create e-books for the Blio e-reader to sell through the Blio online bookstore via a partnership with Baker & Taylor.

The Blio e-reader is a free multiplatform, multidevice application that viewers can use to read e-books and multimedia-enhanced content on a variety of devices. Blio was not available for the Mac at press time, but is planned to be later this year. An iOS version of Blio is under review with the Apple App Store.

In addition, XPress 9 offers an option for exporting to ePub. Designers can

create text-based e-books for publication to e-book stores like Apple's iBooks, Barnes & Noble's Nookbook Store, and Amazon's Kindle Store.

Desktop Publishing Features

Alongside its focus on mobile devices and cross-media integration, Quark has enhanced its desktop publishing app with features like Conditional Styles, Bullets and Numbering, Callouts, ShapeMaker, ImageGrid, Linkster, Story Editor, Cloner, and other additions.

Availability and Pricing

QuarkXPress 9 will ship in April 2011, and it will cost \$799. Upgrades from QuarkXPress 8 and QuarkXPress 7 are \$299. Anyone who purchased version 8 in 2011 can get QuarkXPress 9 for free.



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REVIEWS

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SOFTWARE

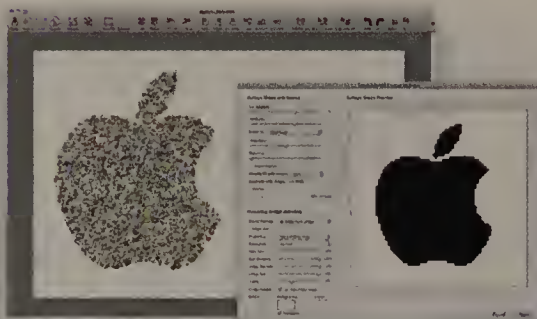
cf/x alpha 1.2.5 ▸

To create complex and stylish collages with up to hundreds of photos, you can turn to cf/x software's alpha 1.2.5. The main attraction is the program's automated collage generators: Canvas Fill can create a collection of photos in different sizes and crops. Arrange By Shape collects photos within a well-defined shape. Mosaic creates collages based on another photo. The software has some shortcomings: There's no media browser; no multiple undos; and no text tool in the midlevel version we reviewed. Plus, the software ties users to the pixel-per-inch measure of the display without offering a zoom tool. The app's drawbacks don't sink the ship, but its methodology is somewhat cumbersome and counterintuitive (macworld.com/7016).
 ⚡⚡⚡; \$230; cf/x software, www.cfxsoftware.com



Scrivener 2.0.2 ▴

Scrivener 2.0.2, a writing program, offers an extensive suite of writing aids without ever forcing users to conform to any set process. The new version makes it even more seamless to switch between viewing individual documents as text, virtual index cards, or sections on an outline. Scrivener 2 also simplifies editing and revising. The new Collections let you gather subsets of documents in tabbed folders at the top of the left-hand Binder column. You won't find a better value—or a better writing program—for your money (macworld.com/6753).
 ⚡⚡⚡; \$45; Literature and Latte, www.literatureandlatte.com

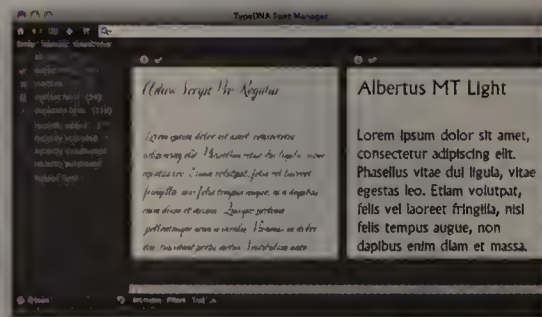


Suitcase Fusion 3

If you're a designer wanting to use the Web Font capability in CSS-based Websites, Suitcase Fusion 3 will speed your work dramatically—as long as you want to use Extensis's collection of Weblink fonts. For other designers, the font management program's new QuickMatch feature is a handy way to explore fonts with similar appearances, and the new Photoshop auto-activation plug-in is a godsend. The ability to create application sets, drag previews to your desktop, and clear font caches may also tip the scales in favor of this upgrade (macworld.com/6987).
 ⚡⚡⚡; \$100; Extensis, www.extensis.com

TypeDNA 2.0 ▾

TypeDNA is a unique and valuable design tool. Beginners can use it both as a stand-alone font manager and as a way to explore their font collections and learn about how fonts work together. Creative professionals can also use TypeDNA to add new font capabilities to Adobe InDesign, Illustrator, and Photoshop. Notably, the TypeDNA site has an ingenious interactive overview of all the features in the interface, which lets you step through every feature by pressing forward and backward arrow buttons. At \$39, TypeDNA 2.0 belongs in everyone's toolbox (macworld.com/6988).
 ⚡⚡⚡; \$39; TypeDNA, www.typedna.com



Top Products

YOUR GUIDE TO THE BEST HARDWARE WE'VE TESTED

DVD BURNERS

Desktop and Portable

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
d2 DVD±RW w/LightScribe www.lacie.com	⚡⚡⚡	\$90	desktop	3900
MediaStation 8X External Blu-ray Writer (pictured) www.buffalotech.com	⚡⚡⚡	\$220	Blu-ray	5344

CAMCORDERS

High Definition

PRODUCT	RATING	PRICE ^A	TYPE	FIND CODE ^B
Flip MinoHD (120 Minutes) (pictured) www.theflip.com	⚡⚡⚡	\$159	mini camcorder	5512
Vixia HF M32 www.canon.com	⚡⚡⚡	\$599	AVCHD/MPEG-4	6848

^A All prices are the best current prices taken from a PriceGrabber survey of retailers at press time. ^B In a browser's address field, typing a find code after macworld.com/ takes you to a product's review or overview.

MacMania 12



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Cruise prices start at \$1,029 per person. The MacMania 12 Program is \$1,095. Taxes and other fees are \$208 pp. For more info contact Neil at 650-787-5665 or neil@InSightCruises.com

Here is a sampling of the 13 sessions you can participate in while we're at sea. For a full listing of seminars visit InSightCruises.com/Mac12-seminars

Get West Coast savvy when you experience the majestic **Pacific Northwest**, California's legendary Central Coast, and sunny southern California on MacMania 12, sailing Vancouver, British Columbia to San Diego, California on the Celebrity Millennium September 9 – 19, 2011.

MacMania 12's glorious route encompasses the rugged Northwest, an overnight in San Francisco, Monterey National Marine Sanctuary and Big Sur, the nostalgic seaside on Catalina Island, and sunny San Diego. Certified West Coasters Sal Soghoian and Randal Schwartz, plus deputized West Coaster David Pogue show you how to simplify, streamline, and fully benefit from your Mac and digital devices.

Cabins range from insides at \$1,029 per person, based on double occupancy, through oceanviews at \$1,229 to suites ranging from \$2,649 to \$4,399 pp. The MacMania 12 conference fee is \$1,095.

Get the latest scoop and learn the tips and tricks that help digital devices make life easier. Take in North America's breathtaking West Coast with a friend. Enjoy fine dining aboard ship. Sample regional cuisine and signature sights. Hug a tree. MacMania makes it seamless for you.

Join the fun now! This cruise will sell out quickly as it is also an official Celebrity "Savor Your Destination" Specialty Wine Cruise. Make your reservation online, and call us at (650) 787-5665 or write Concierge@insightcruises.com with your questions.



Giant Panda at the San Diego Zoo



iPhoto: The Missing Manual — In this tippy, tricky session, David Pogue, author of *iPhoto: The Missing Manual*, takes you far deeper into iPhoto than you've thought it possible to go. He shows you how to master the underlying folder structure of iPhoto's digital shoebox on your hard drive, making it possible to back up, split, and merge photo libraries; how to store your photos on the drive you choose, not Apple; and enough additional tips and tricks to make give you the digital-photography bug worse than you've ever had it before.

Inside Mac OS X — Mac OS X has been quietly creeping up in the world, gaining market share and fans — and David Pogue has been quietly amassing the world's juiciest selections of tips, tricks, shortcuts and workarounds. In this informative session, he'll share with you the very best of them, saving you the price of his book, *Mac OS X: The Missing Manual*, on which this class is based.

The iPad: Flat and Infinite — It's not just a "big iPod Touch." It's not "like a laptop without a keyboard." The iPad is a new category unto itself. It runs apps, it's multitouch, it's a glorious ebook reader — and it's just crawling with tips and tricks. David Pogue will be your guide; keep hands and feet inside the tram at all times.

50 OS X Applications Under \$50 — Of the grillions of OS X apps out there, what tools would a connoisseur of Mac freebies actually spend money on? How do you identify the keepers? Get the lowdown on an expert's rigorously screened, cherished set of utilities and daily-use applications that are all under \$50, and which Randal Schwartz says are darn well worth the money. Which are his favorites, and which could become your favorites? Get criteria for selecting tools, and usage hints on how you can harness these nifty "gadgets" for better productivity.

The iPhone and Your Road Life — Wondering how to optimally integrate iPhone's features into your road life? It can seem complicated — apps, accounts, and routines. Randal Schwartz, who travels 30 weeks per year,

every year shows you how he quickly implemented his iPhone as a hub of his traveling lifestyle. In this case study, you'll learn how to bring iPhone features and functionality together to better support your road life.

Automating the Creation of iPad Content — As the demand for content for iPad increases, so does the need for tools to create that content. Mac OS X offers integrated automation technologies and tools, including Automator, Services, and AppleScript, ideal for the preparation and generation of content for the iPad. Geared towards professional and non-professionals alike, this session will include hands-on tutorials covering how to use the automation technologies of Mac OS X to create and distribute HTML-based content for iPad.

Master Your iPad — The iPad is a game-changing device that can quickly become indispensable. Its easy interface combines simplicity with ability, enabling easy access to essential information. In this class, you'll explore the iPad's variety of uses: from browsing books, managing email, navigating maps, to building documents, presentations, and even mastering the art of finger-painting!



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HELP DESK

Answering Your Questions and Sharing Your Tips about Getting the Most from Your Mac

Mac OS X Hints

The insider tips you won't get from Apple

BY MACWORLD STAFF

Open Preview Twice

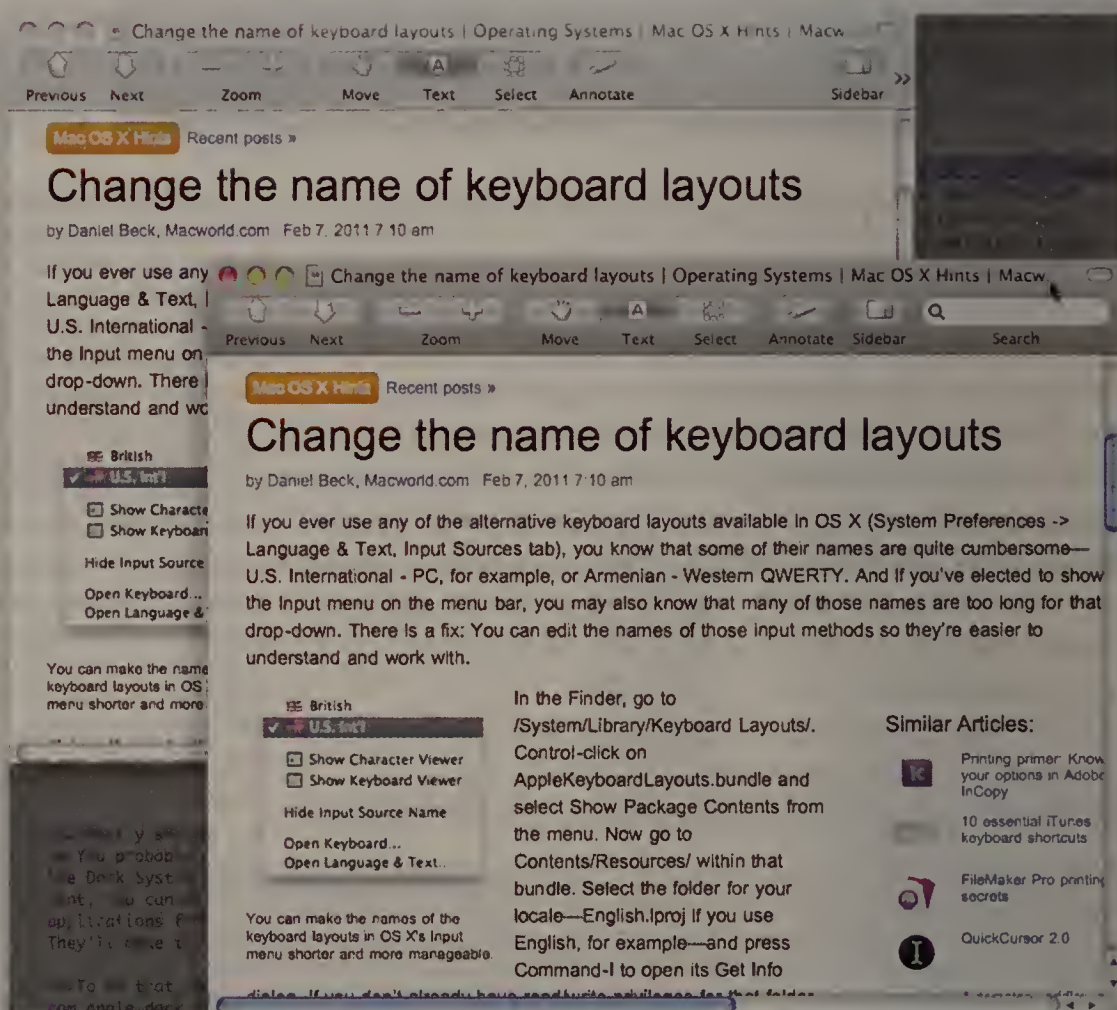
While Preview's bookmarks and search features are great for jumping between different pages in a PDF document, sometimes it'd be handy to view more than one page of a single document on the screen at the same time. Unfortunately, Preview (like most Mac OS X applications) lets you have just one instance of a file open at a time. But there's a way around that restriction.

The **open** command-line program accepts the parameter **-n**, which allows it to launch the application again, even if it's already running. So if you're currently viewing `file.pdf` in Preview, enter **open -n file.pdf** in Terminal. (You'll need to supply the full and complete path to the file, of course; the easiest way to do that is to type **open -n**, then drag the file from the Finder to the Terminal command line.)

Another instance of Preview will launch, complete with its own Dock icon, while the PDF document remains open. Unfortunately, some applications (such as iTunes) resist even this technique, so you can't launch a second iTunes instance—say, to have multiple iTunes libraries open at the same time.

Have a Hint to Share?

Navigate to MacOSXHints.com to submit it. This column was based on tips submitted by Daniel Beck, Keir Thomas, and anonymous contributors. Each month, the author of our favorite tip receives the *Help Desk* mug.



Two Previews Normally, you can have just one instance of an app open at a time; with a Terminal command, however, you can open two.

Hide Desktop Icons

There are times it'd be handy to hide your desktop icons—perhaps to give a presentation from your laptop's screen.

Some third-party utilities (such as Desktop Curtain and Backdrop) will let you do that (and more). But if you want a quick and simple way to hide icons, there's a Terminal command that'll do it for you:

defaults write com.apple.finder CreateDesktop -bool false. Enter that at the Terminal command line, press Return, and then enter **killall Finder**. When the Finder relaunches,

your icons should be gone. To get them back, change **false** to **true** in that command and repeat the process.

Really Shrink the Dock

You can, of course, resize the Dock by opening its pane in System Preferences and dragging the Size slider; you can also click and drag the dotted line that separates the applications from folder stacks. But while these tools can make the Dock small, they can't make it *really* small.

To supershrink the Dock, open up Terminal and enter **defaults write com.apple.dock tilesize -integer 8**.



POWER TIP OF THE MONTH

Toggle Preferences by Script

Sometimes it'd be nice to make changes in System Preferences without having to open it and find the preference pane you want. Turns out you can make some changes with AppleScript. For example, one *Hints* reader wanted a simple way to turn Internet Sharing on and off. So he came up with the following script:

```
tell application "System Preferences"
    activate
end tell

tell application "System Events"
    tell process "System Preferences"
        click menu item "Sharing" of menu "View" of menu bar 1
        delay 2
        tell window "Sharing"
            click checkbox 1 of row 11 of table 1 of scroll area 1
        of group 1
        delay 1
        if (exists sheet 1) then
            if (exists button "Turn AirPort On" of sheet 1) then
                click button "Turn AirPort On" of sheet 1
                delay 1
            end if
            click button "Start" of sheet 1
        end if
    end tell
end tell
```

To implement the script, enter it in AppleScript Editor, select Save As, and choose Application. Then, whenever you want to turn Internet Sharing on or off, just double-click on that app.

You can adapt the code to turn other kinds of sharing on or off; just adjust the numbers in the line beginning **click checkbox 1**. The code is also a template for other preference-changing scripts; just change **"Sharing"** in the seventh line to the name of the pane you want; trial and error, and searching on Google, will take you from there.

Press Return and then type **killall Dock**. The number at the end of the command can range from **1** (too small to be useful) to **16** (the smallest you can achieve through the usual methods).

To make the mini-Dock useful, you'll need to turn on Dock magnification. (In the Dock preference pane, select the box next to Magnification and adjust the slider. The easiest way to get the Dock back to a more normal size is to open its preference pane again and use the Size slider; as soon as you click and drag it, your Dock will be back in the normal range.

Edit Keyboard-Layout Names

If you've ever used any of OS X's alternative keyboard layouts (in System Preferences, go to the Language & Text pane and click the Input Sources tab), you know that some of their names are cumbersome—U.S. International - PC, for example, or Armenian-Western QWERTY. Fortunately, you can edit those names so that those layouts are easier to work with.

In the Finder, go to /System/Library/Keyboard Layouts. Control-click on AppleKeyboardLayouts.bundle and select Show Package Contents from the menu. Navigate to Contents/Resources within that bundle. Select the folder for your locale—English.lproj if you use English, for example—and press ⌘-I to open its Get Info dialog box. If you don't already have read/write privileges for that folder, open the padlock at the bottom of the dialog box, provide your administrator's credentials, click the plus-sign (+) button, and add yourself to the permissions list. With your name still selected, select Apply To Enclosed Items from the Action menu.

Navigate to the English.lproj folder and open the InfoPlist.strings file in a text editor. Find the name of the keyboard layout you want to change—for example, **"USInternational - PC" = "U.S. International - PC"**. Change the name between the quotation marks on the *right* to whatever you want to appear in the Input menu: **"USInternational - PC" = "U.S. Int'l"**, for example. Do not enter a name that's already in use.

When you're done, save and close the file. The next time you log in to your

account, your changes should be in effect. (If you wish, you can change the file permissions for English.lproj back to what they were.)

Download Selected URL

Let's say a friend sends you a link to an app or an MP3 file by e-mail. Downloading the thing usually means copying the URL, opening your browser, pasting in the URL, and then selecting File ► Save As to save the file. To save yourself a few steps, you can create a service in Automator that will do the downloading for you.

Open Automator and select the Service template. At the top right of the window, set the service to receive selected URLs in any application. In the

Internet group of actions, double-click on Download URLs. By default, that action will download URLs to your Downloads folder; if you wish them to go somewhere else, select that other location from the Where drop-down menu. Save the service and give it a name, such as 'Download Selected URL.'

Now, in any app that supports services, find the URL of a downloadable file and select it with your cursor. Open the Services submenu from the application menu, and select Download Selected URL from the list. (Or Control-click on the selected URL and choose the service from the contextual menu's Services section.) The file connected to the selected URL should download to your specified folder.

Mac 911

Solutions to your most vexing Mac problems

BY CHRISTOPHER BREEN

Picture-in-Picture iChat Presentations

Q: I'm scheduled to do a presentation with people thousands of miles away. They're Mac users, so I was hoping that I could use iChat. I want to show them a Keynote presentation, but I'd also like them to see me via my MacBook's iSight camera. Is there a way to do that?

Soren Peterson

A: Launch iChat, locate the person you'd like to chat with in the Buddy list, and click on the Video icon next to their name. After they've accepted your video-chat invitation and you can see each other, choose File ► Share A File With iChat Theater. In the Share With iChat Theater window that appears, navigate to your Keynote presentation and click the Share button.

Your iChat window will now display the first slide of your Keynote presentation. In the bottom left corner, you'll see the image from your buddy's camera. On their end, they'll see a similar arrangement, but your camera's image will appear in their window (see "Sharing Presentations").

A Keynote window called Playing Slideshow: *nameofpresentation* will also appear on your Mac. It contains the presentation's navigation controls. When you're finished with your presentation, just click the Close button and your iChat window will return to its usual picture-in-picture view.



Have a Problem?

Go to the Mac 911 forum (macworld.com/2467) for help with your misbehaving Mac or applications.



Sharing Presentations With the iChat Theater feature, you can easily deliver your presentation remotely.

Clear Your iPad's Memory

Q: I get inconsistent performance from the Netflix app on my iPad. Sometimes it works great. But other times when I try to launch a movie, the Netflix play screen appears for a second, and then the video window disappears. I have a strong Wi-Fi connection, so I don't think that's it. Any ideas?

Tony Moon

A: I've experienced the same thing, and you're right, it's not a Wi-Fi issue—I've had Netflix play perfectly when I have just a couple of bars and quit when I have a full complement of bars. This is a memory issue. If you clear out the inactive cruft in the iPad's memory, Netflix should perform as expected.

There are a couple of ways to do this. One is to simply restart the iPad. Doing so flushes the iPad's memory and cleans things up nicely. This technique

always works for me. Optionally, you can use an app to free up memory. That app is XZone Software's \$2 XSysInfo (xzonesoftware.com/products/xsysinfo). Launch it and you see a lot of information about your device arranged in categories including Usage, Processes, Estimated Work Time, Network, Device Identity, and Tech Specs. We're interested in the Usage pane, where you tap an arrow icon to clear out memory. If you tap the Settings icon, you have the option to clear memory when you launch the app. If Netflix is misbehaving and you don't care to restart your iPad to flush its memory, this app is worth a shot.

Wireless Printing from an iPad

Q: How can I print from my iPad to my Canon MX870 wireless printer?

Matt Ernst

A: That printer doesn't natively support AirPrint, the feature introduced in iOS 4.2 that lets you print wirelessly to a small number of HP printers. If you want to print just photos from your iPad, Canon offers its free Easy-PhotoPrint app (macworld.com/6985). I don't own the printer and haven't used the app, so I can't vouch for its effectiveness, but hey, it's free. Give it a shot.

If you want to use the printer for more than photos—to print documents, for example—try Netputing's AirPrint Activator (payment requested; netputing.com/airprintactivator). Install it on a Mac running OS X 10.6.5 and iTunes 10.1 or later, reinstall your printer, and enable sharing for that printer, and you'll be able to print from your iPad to your printer.

Ecomm Network's \$10 Printopia (www.ecamm.com/mac/printopia) will also do the job. As my colleague Dan Frakes states in his admirable review of this just-as-admirable utility, "It doesn't matter how a printer is connected to your Mac—if your Mac can print to it, it works with Printopia."

Creating Custom GarageBand Samples

Q: I have a toy piano that I would like to sample and use in GarageBand, but I have no idea where to start and what software to use. What's a simple and cheap way to sample this instrument and then use it as a software instrument sound in GarageBand?

Skip Edwards

A: You'll first need a microphone to sample the piano and software to record it with. I won't turn this into a tutorial on how to record audio, so here's the gist. Download a copy of the free Audacity (audacity.sourceforge.net), create a new file, place your microphone in a position where it can capture the best your piano has to offer, start recording, and plunk out a note on the instrument. Name the sample ("TP C3," for example) and save the file in AIFF or WAV format. Create a new file for each note you eventually want to play in GarageBand.

Bugs & Fixes BY TED LANDAU



Solving an Empty Trash Problem

You've just updated to a new version of an application and the old version winds up in the Trash. A message appears informing you that the application can't be deleted because it is "in use." In such cases, quit the application and try again. Empty Trash should now work.

However, with some background utilities, the situation can get more complicated, as these utilities often have no obvious way to quit them. You can disable their function, but they still continue to be "in use" until you either log out or completely restart your Mac.

To avoid this, select Finder ► Secure Empty Trash rather than Empty Trash. This always deletes these "in use" files for me. However, this may leave your Mac in a state where the updated utility is no longer active. Restart your Mac and you're good to go.



Mac App Store Troubleshooting Advice

Apple has posted a slew of help and troubleshooting articles for the Mac App Store. Here are the most noteworthy items:

Purchase Failure When you attempt to purchase an app, the App

Store may balk and tell you that "an unknown error occurred (100)." If this happens, quit the App Store, wait a few seconds, relaunch the App Store, and try again.

Sign-In Failure After selecting Sign In from the Mac App Store's Store menu, the Sign In sheet may fail to appear or, if it appears, won't let you enter text in the username and password fields. The likely culprit here is third-party system-enhancement software. Apple specifically cites Unsanity's FruitMenu and APE (Application Enhancer) as causing this. Disable the third-party software to correct the problem.

General Troubleshooting Apple additionally provides some general troubleshooting advice, which includes:

- If a problem is specific to an individual app, delete the app from your drive and select to reinstall it from the App Store.
- Restart your Mac.
- Reinstall Mac OS X 10.6.6 via Apple's downloadable combo update.

Senior Contributor **Ted Landau** is the founder of MacFixIt (www.macfixit.com). Share your problems at bugs@macworld.com or on Macworld.com's Mac 911 forum.

Launch GarageBand and choose a new Piano project. In the resulting window, select the Grand Piano track and press ⌘-I to produce the Info pane. In the first Browse column, select Sound Effects. In the Instrument column to the right, select Radio Sounds. Now choose Window ► Musical Typing. Locate the samples you recorded of your toy piano and drag them into position on the Musical Typing keyboard—for example, drag the Middle C sample to the correct position on the Musical Typing keyboard (see "Musical Typing"). If you have more samples than will fit on the keyboard, choose a lower or higher octave from the keyboard at the top of the window and drag in your samples.

Click the Save Instrument button at the bottom of the window. You'll be prompted to enter a name for your instrument. Type one and click Save. The instrument will now appear in the Instrument column when you select Sound Effects in the Info pane. Like other software instruments, the one you just made can be triggered by both GarageBand's virtual keyboard and an external musical keyboard. You can use this same technique to create a keyboard full of sound effects. If you'd like more control over your samples, check out SonicAmigo's \$40 PolyPhonics GB (sonicamigos.com). With it you can tweak your samples to a far greater extent.

Archive E-mail Messages as Text Files

Q: I need to export some e-mail messages into Microsoft Word or Apple's Pages. Is there a method that will do this automatically?

Lloyd Hansen

A: There are a few options for doing this. One of the easiest is to open a new word processing document, move to Mail, select the text that you'd like to copy in an e-mail message, and drag the text to the open word processing document.

If you'd like to automate the process—as well as easily add text snippets to a single document—Snow Leopard's Automator can do that. You'd create a Mail-to-Pages workflow this way:

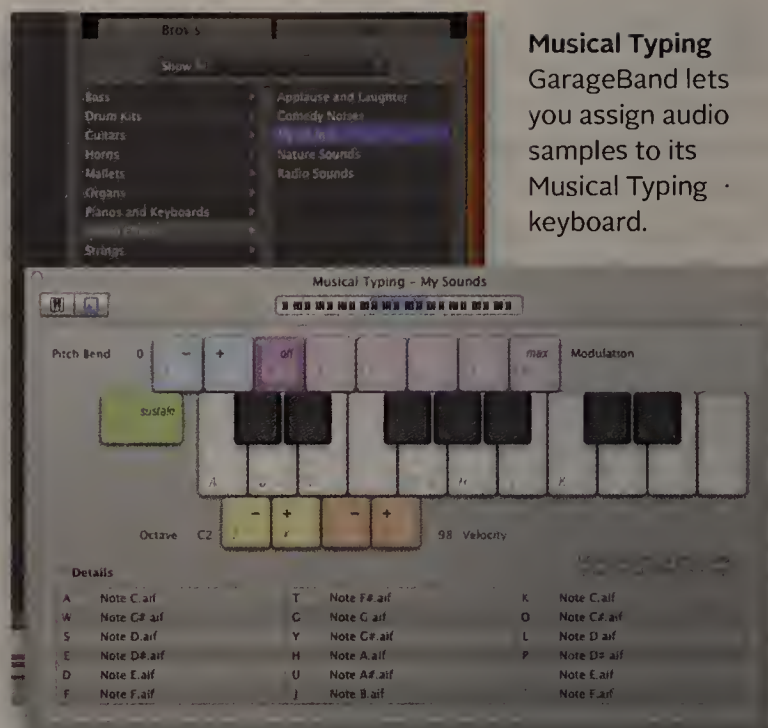
Launch Automator and, in the Template sheet that appears, select Service and click Choose. In the window that appears, add these actions: Copy To Clipboard and Launch Application.

Configure the top of the window to read Service Receives Selected Text In Mail. In the Launch Application action, choose Pages from the pop-up menu. (If you don't see a Pages listing, choose Other at the bottom of the menu and navigate to the Pages application, which is likely in the iWork '09 folder in your Applications folder.)

Launch Pages and open a new blank document. Return to Automator and click the Record button. An Automator Record window will appear, complete with a Stop Recording button. Return to Pages and press the Return key twice. Click the Stop Recording button. A Watch Me Do

action will appear in your Automator workflow. Delete everything in the action except the Type command.

Click Automator's Record button yet again, switch to Pages, and press ⌘-V.



Musical Typing
GarageBand lets you assign audio samples to its Musical Typing keyboard.

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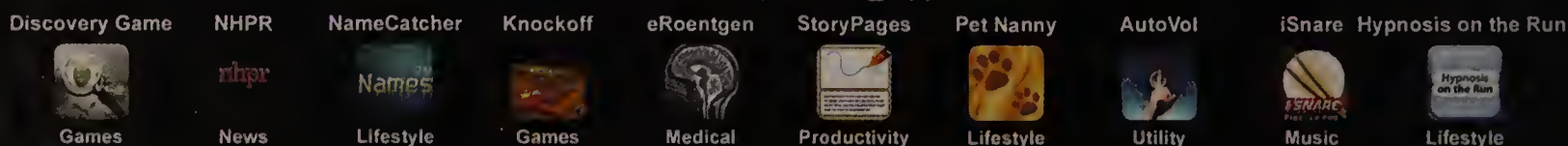
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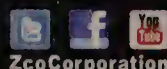
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Adding Locations to Images

Q: When I take pictures with my iPhone and import them into iPhoto '11, they're tagged with location information so that they appear when I choose Places. Is there a way to add location information to photos taken with my "real" camera?

Turner Rouse

A: To assign a place to an event or photos, simply select the event or photos and click the Info button at the bottom of the iPhoto window. In the Assign A Place field at the bottom of the window, enter the location. You can be as broad as 'San Francisco,' or as specific as a street address—'501 2nd Street, San Francisco,' for example. Click on the most appropriate address that appears in the list below. Your selected images will now be tagged with the location you've chosen.

Click the Stop Recording button and return to your Automator workflow. In the new Watch Me Do action, delete everything except **Press 1-V**. In the Timeout area of this action, enter

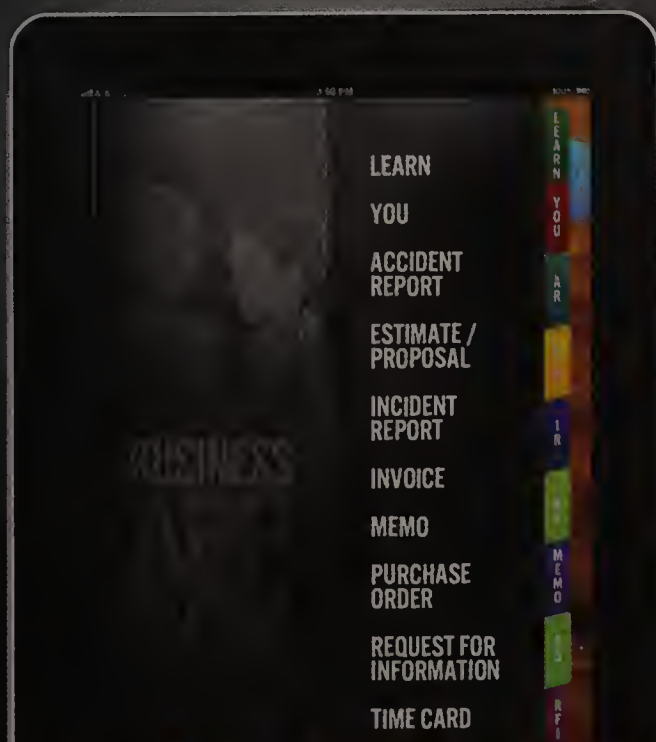
5 seconds. Save your workflow and enter a name for it when prompted.

What did we do? The first action asks Automator to copy the selected text in the e-mail message. The

second action switches to Pages. (Even though the action is called Launch Application, it will switch to an application if that application is already open.) The third action inserts two blank lines—necessary when you want to easily separate one bit of pasted text from the next bit. And the last action pastes the text from the Clipboard into the Pages document (Automator doesn't include a Paste Text action of its own, which is why we had to use Watch Me Do).

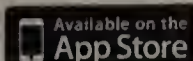
This workflow becomes more effective when you launch System Preferences, select the Keyboard preference, click Keyboard Shortcuts, choose Services, locate the service you just created (it will appear under the Text heading), click to the right of the service, and assign a keyboard shortcut to it. This makes the service easier to invoke later. You can also choose it from Mail's Services menu if you want.

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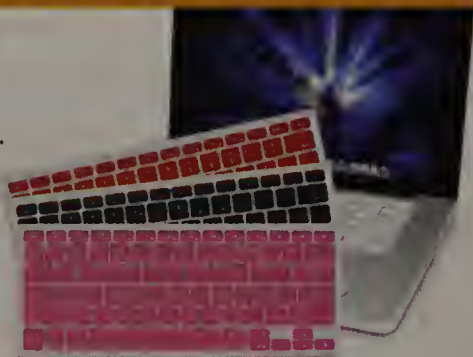


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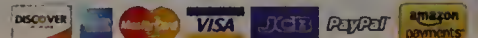
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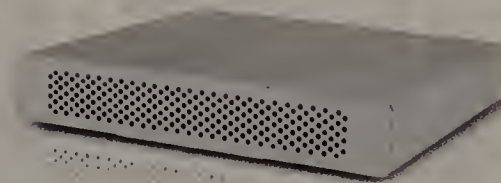
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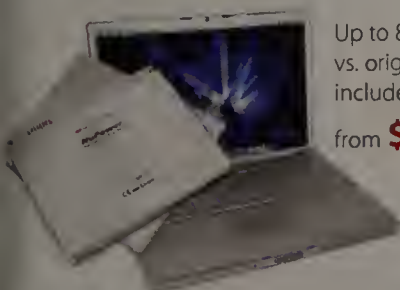
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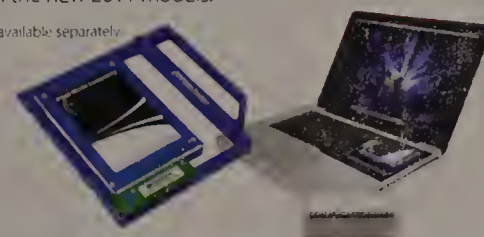
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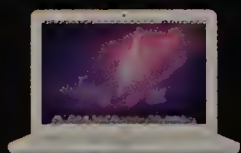
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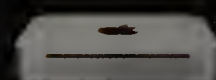
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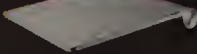
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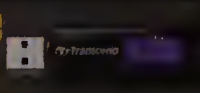


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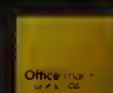
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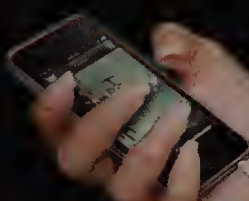
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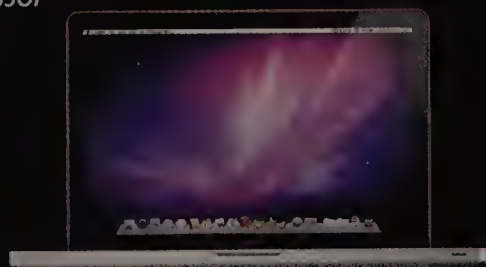
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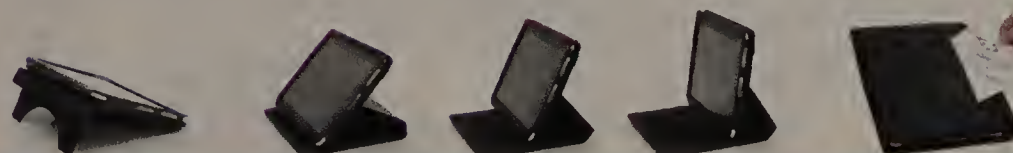



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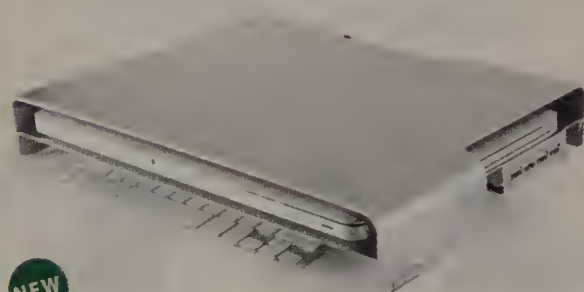
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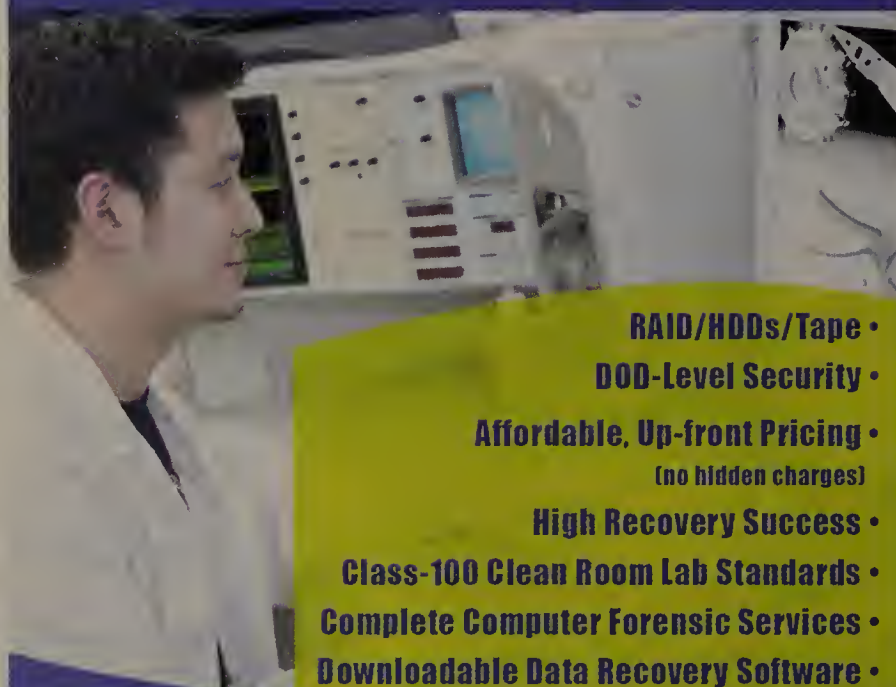


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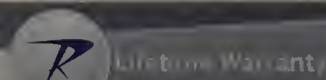
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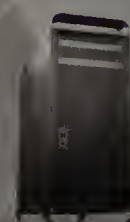
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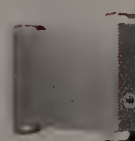
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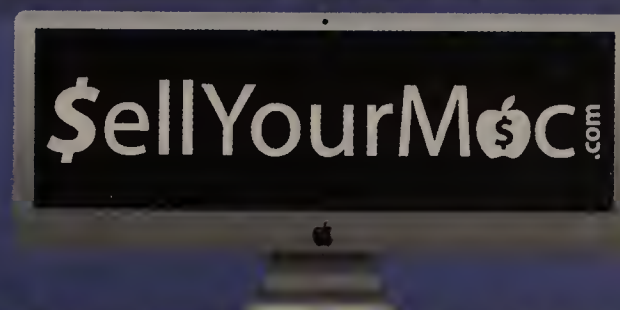
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The Fear of Living Dangerously

Why we're so forgiving when Apple leaves things out

Recently, iTunes informed me that Apple had released version 1.3 of Keynote for the iPad. I read through the list of new features: additional stability; a fix for a bug that I'd never encountered (it no longer sends your bio slide to the JumboTron in Times Square so thousands of people can laugh at your CV), and so on. Then I read: "Presenter display shows the current slide, the next slide, or your notes when connected to an external display."

I felt like the luckiest boy in the world.

Until recently, when traveling to give a talk, I wouldn't take my MacBook. I'd just toss my iPad and a display adapter in my smallest laptop bag and go. But there was one thing I didn't like about the iPad as a presentation device: If I was facing an audience, I had to turn around and look at the projection screen to see what slide I was on. Before this update, Keynote wouldn't mirror the slides on the iPad; the tablet's ten-inch display would be almost completely dark.

With this update, the iPad's screen now displays the slide that the rest of the room is seeing. Huzzah! But wait: Shouldn't that feature have been in Keynote 1.0?

It's not like there was some huge technical hurdle to overcome. I had been using a wonderful Keynote alternative—Picture Link, by Zuhanden GmbH—that offers iPad/projector mirroring. (It also lets you run through slides in any order you want and insert HyperCard-style links between slides.) I won't presume that a startup like Apple has the resources of a Zuhanden GmbH. Still, the belated addition of a seemingly basic feature is a signature move for Apple. We're often so grateful for a new feature that we forget it should have been there all along.

Where Was Printing?

Apple rolled out the new edition of Keynote alongside the iOS 4.2 update. A dispassionate observer might have said

that the iPad should have supported multitasking and printing from day one. You might have wondered why the iPhone had to wait even longer for those two things, to say nothing of cut and paste.

The usual answer is that Apple would rather develop broad infrastructures than simple features. Allowing third-party apps to run simultaneously takes no time at all; developing a framework and an API so that those apps can run together without crashing takes time. Cut and paste is so simple that even I wrote a routine for that in a few hours. But a cut-and-paste system that works consistently, across all apps and with all forms of media, takes time.

That same logic holds for printing. Sure, iOS (like Mac OS) is built on Unix, with a printing architecture baked right in. But Apple wanted an infrastructure for *driverless* printing—a concept that's becoming increasingly important as mobile devices take on more and more of a conventional computer's workload.

We're so grateful for a new feature that we forget it should have been there all along.



We forgive Apple for leaving features out, though. We're confident it'll get around to them in time. The danger is that someday we'll accept that as normal. It isn't. Our expectations should always be high, and we should never lose our ability to feel disappointed.

Risk Aversion

I've been playing with the Samsung Galaxy Tab. It isn't a real iPad challenger, but it's the first tablet to roll down the tracks that the iPad laid down. One of the first things I did with it was point its browser at a TV network's Website to see how well the Tab played Flash video. And I'll be damned: It played it just fine.

So why can't we have Flash on our iOS devices? Why must we wait for Apple's vision of a broad HTML5 infrastructure? Sure, Flash isn't perfect: It runs down the battery and it works best for shows where the camera is locked down (talk shows, for example). But having Flash is the difference between being able to watch the *Doctor Who* special edition of the Craig Ferguson show and not.

I recently read something about Walt Disney that reminded me of Apple. Someone who worked with him said (and I'm paraphrasing): "Walt wanted to make sure that, if you came to Disney World, you'd have a fantastic time. But he also wanted to be sure that there was no way you'd have a bad time."

That's everything you need to know about Apple. It could put out stuff, such as Flash on the iPad, that doesn't work perfectly, just to get it out there—but it doesn't. Its roller coaster is always smooth and well-maintained. But sometimes you miss the extra thrill of the shaky old wooden one that someone died on three summers ago.

Andy Ihnatko is a longtime *Macworld* contributor and the tech columnist for the *Chicago Sun-Times*.



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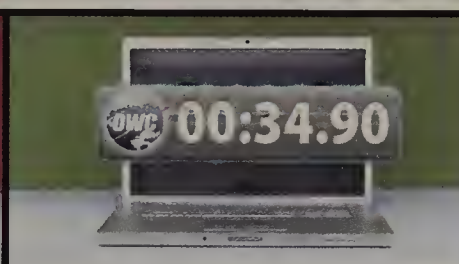


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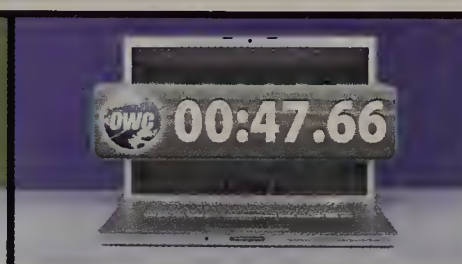
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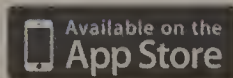
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